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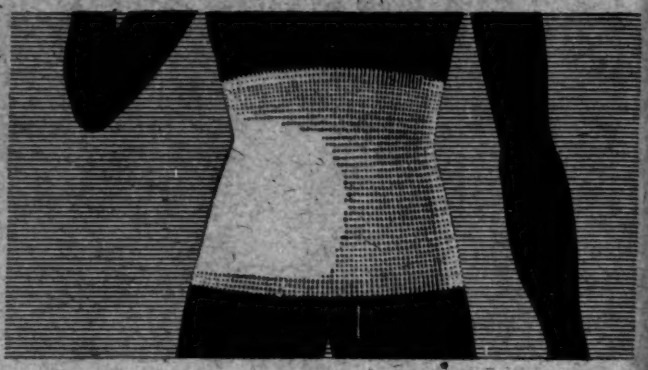

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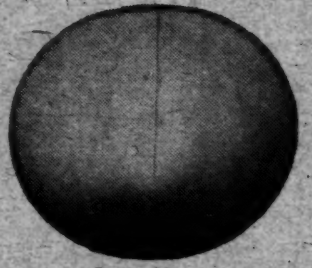

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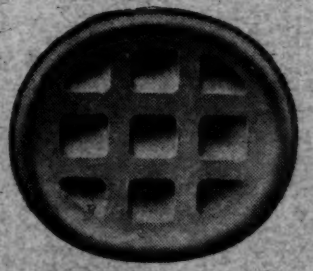

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BRITISH MEDICAL JOURNAL

LONDON SATURDAY DECEMBER 20 1952

# A COLLEGE OF GENERAL PRACTITIONERS

## REPORT OF THE GENERAL PRACTICE STEERING COMMITTEE (1952)

*On the shoulders of the family doctor rests the care of the people.*

Last July, in his presidential address to the British Medical Association, the President said:

"It is common belief that the status of the general practitioner has gradually become lowered. . . . This is a reflection on the medical profession as a whole, for it is by the standard of the general practitioner that the entire profession is measured. . . . The first essential is to curb the incentive for specialization, which has been encouraged to an unreasonable degree. . . . Many more students should be encouraged to aim at general practice. . . . The general practitioner should occupy a position second to none in the profession."[118]

Within the last few months the *Lancet* has written in its editorial columns:

"The profession as a whole is conscious that the most pressing need of the next five years is to sustain or revive good general practice and secure conditions in which it will flourish. . . . There could hardly be a better moment, therefore, for reviving the demand of general practitioners for the kind of academic status and representation that has been so valuable to their colleagues in other branches of the profession."[78] "General practice, no less than the specialties, needs a leavening of exceptionally able men and women; and exceptional ability often needs to be attracted by the prospect of exceptional reward. In this light the formation of a college or faculty of general practice should not be long delayed."[81] "A college or faculty of general practice could do much to attract to this indispensable and rewarding work a fair share of the profession's best skill."[84]

These are reasonable statements, with which most doctors will agree. There can be few who do not think that there is now a real and immediate need to improve the standing of general practitioners, and to allow them to develop academic representation and headquarters of their own.

During the past twelve months the General Practice Steering Committee has been sifting and discussing evidence (collected not only from all over the British Isles, but also from Canada, Australia, New Zealand, and the U.S.A.), all of it concerned with the possible foundation of an academic body, with broad educational aims, to be the headquarters of general practitioners in Great Britain and to help and encourage them to maintain a high standard. These letters show much thought and deep feeling; and the evidence that such an organization is now needed seems to be overwhelming. Details of the title, constitution, and functions of such a body form the basis of this report.[5 20 99 100 101 158 *]

It is clear to the steering committee that the leadership of a "British Academy of Medicine" is the goal towards which all of us must strive—a central headquarters in which can be represented all branches of the medical profession in this country.[36 37 38 132 142] But this ideal, involving perhaps some sacrifices by the Royal Colleges, is still a long way ahead; and it may be many years before it can be achieved. In the meantime there is an urgent need for the foundation, now, of an organization run by practitioners for practitioners, to ensure that the best achievements and traditions of general practice are preserved, and that the best of future developments are encouraged. Such a move is an essential preliminary, in the steering committee's view, to the reintegration of medicine in Great Britain and to restoring perspective to the picture of general practice.[167] True integration of the various sections of the medical profession will be greatly helped by this internal integration of its largest branch. The foundation of such a body will do much to help general practitioners in the immediate future and during the next 20 years or so; and it will pave the way for their satisfactory representation in a British Academy of Medicine if, and when, this is formed.

A general practitioner has been defined as "a legally qualified doctor of medicine who does not limit his practice to a particular field of medicine or surgery."[5] We accept this as a short, though somewhat negative definition; but we would add that there are unique, positive features in the role of the family doctor. He must be prepared to assume some degree of responsibility in any and every illness, in people of all ages, over long periods of time; he must play his part in preventive medicine; and he must help in many social difficulties. His deliberate aim should be to achieve breadth of vision rather than great depth in any particular sphere. It is from him that patients first seek advice; to him they should have direct and continuous access; it is his duty to co-ordinate their whole medical care, to ensure that this is of the highest possible quality, to interpret his patients' needs to specialists and hospitals, and to interpret the specialists' opinions back to them. When things go wrong, whatever the complaint and whoever the specialist, it is to the general practitioner that the family often turns for help. His medical responsibilities are widespread and he must be equal to them; and the social problems with which he has to deal are widespread too.

For the purpose we are now discussing the title of "general practitioner" must be allowed to embrace many doctors in institutions such as schools, factories, and prisons, and many who are general duty officers in the Fighting Services, Colonial Medical Service, Mer-

*Reference numbers at the end of paragraphs refer to some of those published letters, papers and leading articles, or personal communications which have helped in the planning of this report.

chant Navy, etc. No members of the medical profession show a greater divergence of ability than do general practitioners. At one end of the scale, "No man or woman is too good for general practice" (Sir Robert Hutchison[30]); and it is by no means easy even for the best to become and remain good general practitioners. At the other end of the scale, if a doctor is discouraged there is no branch of medicine in which he can deteriorate more rapidly.[9]

One hundred and seven years ago general practitioners had a good chance of founding a college of their own[136]: the proposal had reached the stage of a draft Bill prepared by the Secretary of State (Sir James Graham), when they carelessly allowed the opportunity to slip from their grasp. During the past few years W. Edwards,[42] G. Ralston,[138 139] T. B. Layton,[85] P. K. Murphy,[115] and others[95 113 125] have reawakened interest in this project. Throughout all our correspondence during the past few months runs the same theme—the determination that this time the disappointment of a century ago shall not be repeated, and that a sincere attempt shall now be made to improve the efficiency and good name of general practice, to raise its standard and its standing in the eyes of the medical profession, of students, and of the public.[120]

Seven aspects of this problem have been studied by the steering committee: (1) the title of such a practitioners' organization; (2) its functions; (3) criteria for its membership; (4) regional representation; (5) relations with other professional bodies; (6) accommodation; (7) finance. Our conclusions are stated at the end of this report.

## The Title

We have given much thought to the question of a title for a general practitioners' organization. No fewer than eight different titles have been suggested, but for four of these—"Federation," "Institute," "Corporation," and "Society"—there has been little support. Initials must be studied carefully; there must not be too many of them, nor must they clash with those of other bodies. "Association" and "Academy" have been suggested by a few correspondents[78 126]: the steering committee has given both these titles full consideration and has decided against them.

### "Faculty"

A "Faculty" of one Royal College (or, as has been suggested, a "Triple" or "Combined Faculty" of the three Royal Colleges)[78 79] would ensure that these colleges would give it their blessing, co-operation, and support. But many correspondents have written most emphatically against the proposal that practitioners should accept such a faculty. One of them says: "They owe it to the memory of countless generations of predecessors in their practices that they accept no compromise title which carries with it the implication of inferiority to a college. General practitioners have been in a position of inferiority *vis-à-vis* the specialists for years, and it is this that they seek to amend. Were such an alternative title to be accepted, future general practitioners would bear the handicap of a decision made on the grounds of the political expediency of the moment, and they would have good cause to reproach those who lacked the courage to stand firm."[126] Many of our correspondents are most unwilling for their organization to admit inferiority to the existing Royal Colleges by assuming a title that implies it. Another says: "The new foundation must be utterly and completely independent." "A faculty . . . would eclipse our independence at once."[14] One medical journal suggests that even to gain an immediate advantage "general practitioners should not accept any implication that they are a junior or inferior kind of doctor whose affairs should be managed for them by specialists."[79] Another journal says that the vitality and vigour of the practitioners' organization would vary proportionately to the degree of autonomy it possessed, and that "dependence is the very thing which must be avoided at all costs."[113]

Members of the steering committee are in unanimous agreement that for practitioners to accept a Triple Faculty under the aegis of the Royal Colleges, as has been suggested, would be a mistake. The major concern of the existing Royal Colleges must always be the encouragement of the specialized skill and learning of their own Fellows, and they are unlikely in the future (as has been shown in the past) to have the time and the interest left to give adequate and prompt consideration to all the academic problems relating particularly to general practice. Practitioners want most sincerely to co-operate with the Royal Colleges and with the specialists, who are their friends and helpers; but this must be, in the words of the *Lancet*, "in an honoured place in a circle of equals."[79]

### "College"

There is an overwhelming expression of opinion in favour of the title "College" among the practitioners who have written to us and in the medical journals. The great majority of these correspondents believe that a college will in the long run do more good for general practice than an "Association," an "Academy," or a "Faculty." It has been suggested that the title "College" would stir the imagination of practitioners and rally them better than any other title; and that a college could press more successfully for special undergraduate or postgraduate instruction in relation to general practice, and more readily obtain financial support for teaching or research. A college carries with it a distinction that the general public can easily understand and appreciate.[127]

We are not unduly perturbed by the criticism that the boundaries of such a college may at first be a little difficult to define. It is often a mistake to define too early the borders of a new venture: when the Royal College of Surgeons came into being no one imagined that one day it would include a faculty of radiology. A new college has to adapt itself to the requirements of the group of people it has to serve.

The steering committee has given careful consideration to the many different titles that have been suggested for this college: "College of General Practice," "College of General Practitioners," "College of General Medicine," "College of General Medical Practice," etc.; and it has come to the conclusion that "*College of General Practitioners*" is the most suitable.

It has been objected that the foundation of a College of General Practitioners may lead to cleavages in the profession by encouraging various specialist bodies to apply for collegiate status too. We are unanimous in thinking that this disruption is most unlikely. Four large groups of specialists have already accepted faculties—the ophthalmologists, anaesthetists, dental surgeons, and radiologists—and it seems probable that before long others (pathologists, paediatricians, psychiatrists, etc.) will be content to follow their example. If these should insist on collegiate status, however, then surely the time will have come for the foundation of a "British Academy of Medicine."

The *Lancet* has said: "We accept the view that general practitioners are as much entitled to a college as are physicians or surgeons."[79] Such a college will enable practitioners to co-operate on equal terms with bodies bearing an analogous relationship to other branches of the profession.[143] As one of our correspondents points out, "In British usage a college will always rank higher than any other academic body, and no lesser title can

be acceptable."[126] "Our choice of name cannot really be dictated to us . . . only policy of the most pressing kind should cause us to waive our right to form a college if we so desire."[127]

## Functions

### 1. Headquarters

The college will provide a headquarters, organized by general practitioners for general practitioners. Family doctors are widely scattered throughout the country, and one of the early duties of the college will be to establish regional faculties in the university cities and other large centres of population.

The function of such a college, as its name clearly indicates, must be academic and educational, not political; and its aim must be to supplement the work of the universities, the Royal Colleges, the Society of Apothecaries, the British Postgraduate Medical Federation, and other educational institutions, and not to compete with them or encroach upon their functions. It will not seek to institute a qualifying examination. As an organization the college will regard its work as complementary to the scientific and educational functions of the British Medical Association.[62 65]

### 2. Leadership

The college will give a lead to general practice. This leadership must be both central and peripheral, and be supplied by men and women actively engaged in general practice. Above all things, it must be truly national.

The steering committee considers that this leadership of practitioners by practitioners is something of great importance. Specialists can have little real understanding of general practice or first-hand knowledge of its difficulties and problems. A college will be able to collect together family doctors of wide experience, of high ideals and strong personality, who will be ready to fill the many positions of trust which the founding of a college will create.[87]

### 3. Policy

The college will plan and follow an agreed policy about many matters concerning general practice. Working not as a rival to other institutions, nor duplicating work that is already being done satisfactorily, but in its own field and in its own right it will correlate and implement the decisions and policies planned by those committees and other bodies which have concerned themselves with general practitioners. We think that a college will in this way give strength and support to general practice, and ensure that its future development in Great Britain will take place along lines carefully considered by men and women with the right kind of experience.[25 113]

Items of this policy will be to encourage the entry of general practitioners into hospitals for more consultation and closer liaison with the specialists, and to restore or establish general-practitioner beds in those hospitals where it is agreed that this is desirable for the benefit of patients. The need for this has been well expressed by the President of the British Medical Association in his presidential address:

> "It is generally agreed that no doctor can adequately practise medicine to-day without hospital facilities, for a doctor in general practice who has not some access to a hospital is like a 'carpenter without his tools.' The doors of the hospitals should be freely opened to the practitioner, so that he can follow the progress of his patient and test his diagnostic skill at every stage of an illness. In some isolated localities it would seem highly desirable that the smaller hospitals should be staffed by general practitioners with specialists at their disposal."[116]

Other important items of policy will be to press for the provision for all practitioners of direct access to laboratory and *x*-ray facilities (so that they may do as much diagnostic work as possible from their surgeries), and to ensure that practitioners play their part in the development of health centres and clinics.[12]

### 4. Undergraduate Teaching

The college will assist in the training of undergraduate medical students for general practice, and in promoting further experiment in this direction. The General Practice Review Committee of the B.M.A. agreed unanimously that there was a need to teach more about general practice in medical schools.[11]

In the old days there was much good in the system of apprenticeship, with its impalpable influences of example and personal contact. Fifty, or even thirty, years ago many senior men on the consulting staffs of teaching hospitals had been for a time in general practice and knew its problems; this is unusual now. Nowadays, medical students (the majority of whom enter general practice) often qualify without ever having met or spoken to a general practitioner, and without having seen him at work. In what other profession, and in what other branch of the medical profession, would this be allowed? In many hospitals medical students are in touch only with specialists, and they are not given a true appreciation of the opportunities and satisfactions of general practice. The most able among them are not often encouraged to become general practitioners; the rest are not always prepared to the best advantage for this career. Many admittedly settle down well, but some do not. Students must be taught the general practitioner's attitude towards different diseases and symptoms, and towards different types of patients and different situations. At some stage in their training they must also be taught something of the technique of general practice; it is hard for specialists to teach all the details of a technical subject on which they are not working themselves. When students are taught more specifically about the good general practitioner's point of view, and about his methods, they will more accurately appreciate the nature and significance of his work and the keener will they be to join him.[7 8 20 21 84 89 90 92 93 96 97 98 99 173 130 141 152 153]

The steering committee feels that closer contact between medical students and practitioners is advisable, and that a college could help very much in assisting those who are teaching undergraduates to direct their attention to general practice. It could establish the principle that much more in general practice can be taught to students than is being done at present, and that general practitioners exist who are capable of teaching it. A number of medical schools have already realized the importance of this problem and have started pilot schemes which, as is appropriate in experimental work, ran along various lines. The college could correlate them; and, as an advisory body, it could be of assistance to the deans of these schools by helping them to find practitioners who are willing and able to teach students carefully and well. Experienced practitioners may before long be accepted as members of the staffs of teaching hospitals. When they have demonstrated that they are not only willing to accept teaching responsibilities but are in fact able to stimulate interest in the students, they may be brought into the counsels of the schools so that they may advise on the many ways in which the teaching of general practice can be included in the curriculum. They will be able, for example, to organize practical teaching outside the schools by arranging for students to attend the surgeries of experienced and approved general practitioners, and under their guidance to visit also the homes of patients. In this and in other ways the students will gain a real understanding of the problems of general practice.[7 11 21 23]

### 5. Postgraduate Teaching

The postgraduate teaching of general practitioners will be helped and promoted by the college in many ways, in co-operation with the Universities, the British Postgraduate Medical Federation of the University of London, the B.M.A., and the central authorities:

*(a) In Training a Qualified Doctor for a Career in General Practice*

(1) A college could collect information on his needs in this branch of the profession. Much of the practitioner's training in

matters of equipment, etc., begins after qualification, and if he cannot bring his equipment up to date he cannot use his training to full advantage. In every practice much useful experience, many proved techniques, and many good ideas, developed by trial and error over a number of years, die when the practitioner himself dies. The college could offer all this scattered information and wealth of experience to those entering general practice, perhaps with the help of plans and small-scale models of consulting-rooms, dispensaries, etc. This will save much individual struggling and muddling along without adequate guidance; young men and women will be able to come to the college for help—perhaps as associates during their postgraduate year—to an academic home of their own, with a staff specially interested and experienced in their problems. By this means they will choose their equipment and establish themselves in general practice more easily and more quickly than they can at present.

(2) A college will also be able to encourage and help a young practitioner to follow up a special bent, by increasing his knowledge in any particular field in which he is interested. This will not make him into a "specialist" in any sense of the word, but it will be likely to develop special interests and contacts in his work.[88]

(3) A college may be able to improve and to clarify many aspects of the problem of trainee-assistantships; and in several ways principals in practices may be helped in finding suitable assistants.

*(b) In Continuing a Practitioner's Education Throughout His Career*

(1) A college could help general practitioners to keep abreast of progress in ideas, knowledge, and technique. It was once true that the practice of medicine did not greatly change between qualification and retirement; but nothing could be further from the truth now.[73] Various universities, and some Government departments, have been organizing postgraduate teaching for general practitioners. The courses organized by the postgraduate deans and directors of the Universities,[49] by the British Postgraduate Medical Federation of the University of London, by the Ministry of Health, and by the Department of Health for Scotland are good illustrations of such plans. Nevertheless, there has been a lack of co-ordination in these schemes, and standards and attendances have varied greatly from place to place. In the view of the steering committee it would be an important function of the college, through its regional faculties and in close and mutually helpful co-operation with the Universities and the British Postgraduate Medical Federation, to take part in the arrangements for these refresher courses. If one of the criteria for membership of the college is to be a certain number of hours of postgraduate instruction every few years, it is hoped that this will give practitioners just the incentive and stimulus now required to encourage more of them to attend the postgraduate lectures and refresher courses that are being provided throughout the country. The Universities and the British Postgraduate Medical Federation are willing to play their part in providing the courses; the part of the college will be to persuade and encourage practitioners not only to attend them but by local discussion with their postgraduate deans and by central discussion—for example, between the college and the British Postgraduate Medical Federation—to have a say in the type of instruction which is desirable and where it can most conveniently take place. It may well be, as time goes on, that general practitioners may wish for instruction in subjects other than those which are regarded as the special interest of the Universities and British Postgraduate Medical Federation—for example, in the fields of technique, administration, and management of practices. General practitioners, through their college and its regional faculties, should be able to help in organizing much of this postgraduate instruction to ensure that they receive exactly the help they require, when and where they want it. There exist among general practitioners themselves many able and experienced doctors who might well play an active and useful part, as teachers, in some of these courses.[134]

(2) A college could act as a centre for discussing the difficulties that practitioners meet in carrying out their work, and for the exchange of views. Through a central bureau, and with access to specialized information, it might be able to give much helpful advice to practitioners. It could sponsor special lectures, and perhaps exchanges of visits with colleagues overseas.[143]

### 6. Research by General Practitioners

From many letters which have been received by the steering committee, and from publications and correspondence which have appeared in the medical journals, it is clear that there is a reawakening of interest in research work by doctors in general practice and in the possibilities of applying modern principles of scientific investigation to the problems of general practitioners.[69 143] That important advances in medical knowledge can be made by general practitioners has been demonstrated beyond doubt by such men as Jenner, Withering, Thackrah, Budd, Mackenzie, and Pickles; but much of the field in which these men carried out their exploratory work still remains uncultivated, since a great proportion of the conditions met by family doctors never reach the hospitals in which present-day medical research tends to be concentrated.[4 97 126 139]

The encouragement and practical guidance of general-practitioner research (in close co-operation with the Medical Research Council and research departments of the Universities), and help towards the publication of good original work, will be major responsibilities of the college, which will become a centre where practitioners can pool their knowledge and experience. It will be a great asset to practitioners, it is thought, to have direct personal contact with a central body of their own which they will not be shy to approach.[144]

The college research organization can work both centrally and peripherally. The central organization will be equipped to help with the consolidation of clinical records and material from practitioners and their study groups all over the country, and to advise with regard to techniques for the collection and analysis of this material and the necessary controls. Its advice and assistance will be readily available to the single-handed worker, and it can help in the building up of general-practitioner research teams. The peripheral organization will be a function of the college's regional faculties, working in close touch with family doctors in their areas. Various types of practices can be covered by these peripheral study groups so as to provide, when necessary, a representative population sample on which statistical analysis can be firmly based.

The steering committee is convinced that practitioners will need, throughout their investigations, to keep in very close touch with existing research organizations such as the Medical Research Council and the research departments of the Universities; and the help and advice of these bodies will often be sought in a consultative capacity, just as they are now by Members and Fellows of the Royal Colleges. Research is a technique, and even for the planning of a piece of original work the counsel of a number of people may have to be sought. But it is equally clear that practitioners themselves must play the major part in initiating these investigations and in doing the work under field conditions. Many interesting suggestions about this work have already been made to us by general practitioners. It has been pointed out that the British Trust of Ornithology has carried out important and helpful research on bird habits in a way that practitioners might well copy.[139] A "bird of the year" is chosen, and a card sent to all members of the Trust, who keep a record of their observations during the year. If an illness of the year, or a therapeutic procedure, is chosen—one of interest to general practitioners—and if the 20,000 practitioners in this country are asked to observe it carefully, valuable information might possibly come to light which could be published in a report at the end of each year. A college, with its regional faculties, could help in organizing investigations such as this without conflicting in any way with the work of the Medical Research Council or the research departments of the Universities.

Considerable organization will be needed to pick out and to encourage those practitioners who are keen and able to do good original work on their own or in small teams; and as the college grows and develops it will collect much valuable information about these matters—information which the Medical Research Council and the research departments of the Universities now lack, and which by themselves they might obtain only with difficulty. Many ideas which arise from the problems of practitioners in their surgeries, and in their patients' homes, will perhaps become the inspiration of important and widespread investigations.

Later on, college prizes may be given for outstanding work; and research fellowships may become available, financed perhaps by gifts and endowments to the college.

#### 7. Repository for the Traditions of General Practice

The college will record and foster the traditions and ideals of general practice. Without it such traditions may die; and indeed much has already been lost beyond recovery. In these times of change there must surely be a sense of urgency among all medical men and women about this need for the establishment of a collegiate body to record and to preserve the art of the family doctor—one of the branches of medicine in which, in the past, Great Britain has set an example to the world.[121]

#### 8. Status

By its very existence a college will raise the status and enhance the prestige of the general practitioner among medical students, specialists, and the public.

#### 9. Quality of General Practice

A college should be able, before long, to improve the quality—the art and the skill—of general practice by setting a high standard and by encouraging and helping general practitioners to reach and maintain it, in the same way that the Royal Colleges have raised and maintained the standard of specialized practice.

If in the course of time a diploma is to be granted by a College of General Practitioners it will in no way interfere with the present qualifying examinations. For those who have been long in practice it will probably be obtainable by election; but if for younger men and women an examination is to be held, later on, this will be in breadth rather than in depth, and only in those subjects which are of particular interest and importance to general practitioners in their daily work. It will always be only one of several portals of entry into the college. But to be worth having at all as a professional distinction it must be something of a hurdle—an emblem of quality worth striving for. The steering committee believes that the decision about such a diploma must take its own course. If arrived at too early it will give rise to considerable suspicion and distrust. It is by no means essential for the founding of the college, or during its early years. The Americans do not have a special diploma in their Academy of General Practice. This decision will essentially be one for the college as a whole to make after it has been soundly established, rather than for the steering committee.[4 40 41 55 88 71 87 88 89 123]

#### 10. Other Activities

Many other activities are sure to be developed by the college as it grows—for example, there are broad unexplored fields lying between the boundaries of general practice and organized research. The general practitioner is the right man to investigate many of them, and a college could help him in these clinical and sociological studies, which are distinct from what is usually regarded as "research."

### Criteria for Foundation Membership

Any academic body must be able to establish criteria of efficiency and give recognition to those who satisfy them. What combination of experience, seniority, original work, and academic attainment will qualify for associateship, full membership, or fellowship of the college, and what privileges these will be expected to carry, are some of the problems that will have to be faced by the college council when it comes into being.[141]

The steering committee is concerned with *Foundation Membership*. How will practitioners be able to join at first? The acceptance of foundation membership will be an act of faith in the future of the college; and to become a founder member will, we hope, be an honour restricted to general practitioners whose worth has been established by the quality and the duration of their services. In the opinion of the steering committee foundation membership should be restricted to doctors in the British Isles or overseas whose names are in the *Medical Register*: the criteria for foundation membership should be simple and straightforward and be limited to three, any *one* of which should enable a practitioner to become a founder member of the college:

(1) *Twenty years in general practice* or service as a general medical officer (with primary charge of patients) in a school, factory, or other institution, in Her Majesty's Forces, Colonial Medical Service, Merchant Navy, etc.

(2) *Five years in general practice (or its equivalent) and an undertaking to attend a certain number of hours of postgraduate instruction every year.* Our American colleagues ask for an average of three days' attendance a year at formal postgraduate or refresher courses, and other time spent at medical society meetings, etc. These figures can guide us. This criterion will open the doors of the college to every doctor doing general practice who is keen to enter. By no means all practitioners in the country will be willing to undertake even this small amount of postgraduate instruction. In America, 15% of the 100,000 family doctors are members of the American Academy of General Practice, which is already one of the most influential medical organizations in the U.S.A. In Great Britain, if the college does its work satisfactorily, the steering committee hopes that a substantial proportion of the general practitioners will become members before very long and be willing to do some regular postgraduate work. At first the number will necessarily be smaller and a start will have to be made in a modest way.

(3) *Five years in general practice (or its equivalent) and the possession of a higher medical postgraduate degree or diploma of England, Scotland, Wales, or Ireland.*[104] Some individuals may not necessarily have become better doctors when they have added extra letters after their names; but general practice as a whole must surely benefit from a widening of the medical education of those in its midst, especially when this has involved many months of extra postgraduate instruction and work.

#### Foundation Associates

It is suggested that younger men and women who are interested in the college, who contemplate entering general practice, or who have not yet completed five years in general practice should be able to join as Associates.

### Regional Representation

One of the most important parts of the college will be its regional faculties, situated in appropriate centres. The steering committee wishes to emphasize most strongly that the college must be truly national. Details of this regional representation will have to be worked out by the foundation council and by the college council; and for ease in arranging postgraduate courses it will be as well for these regional faculties to be in close touch with the postgraduate departments of the Universities and the British Postgraduate Medical Federation.[124] At a recent conference of university postgraduate deans and directors it was agreed that this co-operation would be possible.

### Relations with Other Bodies

1. *The Royal Colleges.*—Members of the steering committee wish to make it clear that they do not consider that a College of General Practitioners should interfere in any way with the present activities of the Roval Colleges. It will supplement their work, and perhaps run parallel to it, but it will not compete with them. We are all striving towards the same goal, and a renaissance of general practice (with its own headquarters directing this) will benefit every branch of the medical profession in this country. There should be no conflict between practitioners and specialists: they have their own particular tasks; neither can replace the other. There happens to be a wide sphere of activity common to both; but both are essential, and they are complementary to one another. When all the evidence about our project has been presented and the position has been clarified, we hope that the Royal Colleges will co-operate with us and help us generously, and a great step forward thus be made towards the integration of British Medicine.

2. *The British Medical Association.*—One of the earliest and most stimulating discussions upon the possibility of founding a College of General Practitioners took place in the General Practice Review Committee of the British Medical Association.[11] The *British Medical Journal* has said: "If one is to judge by the volume of support the suggestion has received, it should be examined with the idea of finding reasons for, rather than against, its establishment."[10] The B.M.A. is concerned with the whole of medicine. Its principal contacts with general practice are through its standing committees—the General Medical Services Committee and the Private Practice Committee—and from time to time it appoints special committees to consider particular problems—for example, the Committee on the Training of the General Practitioner, or the General Practice Review Committee. The G.M.S. Committee is concerned almost wholly with the terms and conditions of work of general practitioners under the National Health Service, and it does not enter into the field of the art and science of medicine; the same applies to the Private Practice Committee in its more limited capacity. The activity of a College of General Practitioners should be complementary to, not in competition with, the scientific and educational work of the B.M.A. and its valuable committees: it should not deal with terms of service or compete with the G.M.S. Committee. Much of the work of the proposed college will be breaking new ground, over which it will co-operate with the B.M.A. in every possible way. As the B.M.A. represents not only general practitioners but the whole of the profession we cannot expect unqualified support from all its members; but we trust that the very large number of those members who are interested in our project will ensure that, within the Association, its progress will be followed with understanding.

3. *The Society of Apothecaries.*—It is not always appreciated how much general practice owes to the Society of Apothecaries. Since 1617 this society has striven for reforms and for the improvement of the lot of family doctors.[47 48 136 160] It is historically and by tradition the natural ally of the proposed new college. Practitioners have been assured of the sympathetic interest and willingness to help of the Court of Assistants, which is (as Dr. Roche Lynch, its recent Master, has said) "fully alive to the importance of establishing a College of General Practice."[93 94]

4. *The Royal Society of Medicine.*—The General Practice Section of the Royal Society of Medicine with its largely local membership (London and the Home Counties), by its promising start and by its profitable meetings, has already greatly helped the academic side of general practice. Its work and the work of a College of General Practitioners will be complementary to one another, just as that of the other sections of the Royal Society of Medicine are complementary and in no way antagonistic to the work of the Royal Colleges.

5. *Other Medical Societies.*[105]—There are many other clinical societies throughout the country, composed largely of general practitioners, with whom we hope that the college will co-operate closely.

## Accommodation

Hitherto, through the generosity of the Hon. Mrs. Geoffrey Evans, the committee-room of the steering committee and some of its secretarial facilities have been at 7, Mansfield Street, Portland Place, London, W.1. The Society of Apothecaries has kindly offered us a postal address, and accommodation for meetings, from January 1, 1953.

## Finance

The steering committee's secretarial expenses will be met out of the generous gifts for this purpose which have already been received. The Foundation Council and college expenses will be met out of funds raised by the college itself—entrance fees, subscriptions, gifts, endowments, etc.

The beginnings of the college will necessarily have to be modest, as were those of the Royal College of Obstetricians and Gynaecologists[164]—a committee-room and a small but efficient secretariat in London, and perhaps in some of the provincial faculties. As it grows, sufficient funds will be forthcoming if its work proves to be good and useful.

## Conclusions

General practice is the oldest branch of medicine. Over 80% of this country's illness is cared for by family doctors; and here, as in Canada, Australia, New Zealand, and the U.S.A., it has been found that one of the most difficult tasks in medical administration and planning has been to find the proper role of the general practitioner in modern medicine. There is taking place now a world-wide reorientation of ideas about his capabilities and correct responsibilities, with a steadily growing conviction that general practice is fundamentally as important as the specialties, that its art is really different from that of the specialists, and that it cannot be controlled altogether by specialist organizations. General practitioners have been in the past, and must be in the future, good doctors practising medicine in their own right: they are essential to the heart and soul of medicine. It is being increasingly realized that this development and emancipation of general practice is not only a question of professional pride and status but is an urgent economic need—to keep patients out of hospitals whenever they can be investigated and treated at home. Only by developing a higher standard of general practice, and by making full use of properly trained general practitioners (with access to hospital and laboratory facilities), can the present overcrowding of out-patient departments and excessive specialist consultations be avoided.[78 83 119 126 135 137]

A golden opportunity now presents itself for general practitioners to found an organization of their own, to watch over their academic interests and their education. The steering committee can find no evidence that any existing administrative body in this country is doing now, or will be able to do in the future, what practitioners require. Our evidence suggests that a new college to lead general practitioners will help them more than will any other organization, and that the influence of such a college for the good of general practice cannot fail to be profound. We have already had indications from all parts of the country that such a college will have widespread support from practitioners themselves. During the past 12 months appeals have been made for an alternative or better suggestion, but no better detailed proposal has been put forward. The matter is urgent. In the words of the *Lancet*, "with the National Health Service still malleable, there is much to be done now," and there is an immediate need for general practitioners to "establish for themselves an academic body that will find its voice soon."[78]

In this report we submit our considered proposals about the new college, along lines which the majority of our correspondents seem to desire. These are put forward in an attempt to construct a framework for future development, in co-operation with existing institutions. We realize that the final details of this college—its exact name, the qualifications for its membership and fellowship, its duties, its relations with other professional bodies, its premises, finance, etc.—must be decided by general practitioners themselves, and by no one else. The duty of the steering committee has been to ensure that this matter was piloted safely up to the point where practitioners themselves could take the helm.

## The Foundation Council

The steering committee has now handed over to a Foundation Council of general practitioners. This Council will supervise, for the time being, the affairs of "*The*

*College of General Practitioners,*" which has been formed as an unincorporated association with this provisional title. The Society of Apothecaries has kindly offered us *14, Black Friars Lane, Queen Victoria Street, London, E.C.4,* as a postal address and as accommodation for meetings.

A detailed constitution for this college has been prepared, which consists of a Memorandum of Association (which deals primarily with its objects) and of Articles of Association (which regulate its internal affairs): these are too long for reproduction here, but copies can be obtained on application to the secretary at the address above. Any part of them can be altered by a special resolution passed at a general meeting. At first it is intended that the college shall operate as an unincorporated association: in a few years' time we hope that it will have proved its worth sufficiently to justify application for incorporation under the same name, and later for a Royal Charter.

The Articles of Association provide that the affairs of the college shall be conducted by a council. Initially, the Foundation Council will consist of the 10 practitioner members of the steering committee; but as soon as possible in the new year 11 additional members will be appointed, following a circular letter which is to be sent to all those general practitioners who are known or believed to be actively interested. This Foundation Council of 21 members will draft provisional by-laws dealing with qualifications for ordinary membership and fellowship, functions of the college, appointment of officers, meetings, details of the regional faculties, etc., and it will complete the foundation membership.

### Foundation Membership

*Qualification for Foundation Membership* (which will be restricted to doctors in the British Isles or overseas whose names are in the *Medical Register*) will be one of the following:

(1) Twenty years in general practice, or its equivalent as a general medical officer (with primary charge of patients) in a school, factory, or other institution, in Her Majesty's Forces, Colonial Medical Service, Merchant Navy, etc.

(2) Five years in general practice (or its equivalent) and an undertaking to accept postgraduate instruction for three days (or a corresponding number of hours) each year, or for five and a half days every two years.

(3) Five years in general practice (or its equivalent) and the possession of a higher postgraduate medical degree or diploma.

Foundation members are invited to join on or after January 1, 1953: the entrance fee will be 10 guineas. Doctors who have not yet completed five years in general practice, and newly qualified men and women who contemplate entering general practice, are invited to join as *Foundation Associates,* the entrance fee for whom will be one guinea. Account will be taken of all foundation payments when a final decision on fees is made at a general meeting. Application forms may be obtained from the secretary at the address above.

A general meeting will be held some time in 1953 at which the whole of the Foundation Council will retire, a new Council will be elected by the full body of members, the provisional constitution will be reviewed, and the by-laws will be submitted for amendment and confirmation. A second general meeting will be held in 1954, when the whole Council will again retire and the constitution and by-laws will once more be examined. Thereafter the College should be soundly established; and to ensure continuity of direction it is suggested that one-third only of the Council retire each year.

The Council and Foundation Members of the college will have a formidable task before them to develop an effective and permanent organization. Their path will inevitably be rough and beset with difficulties, and their progress may necessarily be slow. But they are assured of loyal and active support from many quarters; and we, the members of the steering committee, hope and believe that their ultimate achievements will be even beyond our expectations.

Our report is unanimous.

(*Signed*)

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Dr. G. O. BARBER (Essex).
Mr. JOHN BEATTIE, F.R.C.S., F.R.C.O.G.
Dr. D. M. HUGHES (Carmarthenshire).
Dr. J. H. HUNT (London) (Hon. Secretary).
Sir WILSON JAMESON, M.D., F.R.C.P. (Master of the Society of Apothecaries; late Chief Medical Officer, Ministry of Health).
Professor J. M. MACKINTOSH, M.D., F.R.C.P. (Professor of Public Health, University of London).
Sir HENEAGE OGILVIE, D.M., M.Ch., F.R.C.S. (Editor of *The Practitioner*).
Dr. R. J. F. H. PINSENT (Birmingham).
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Dr. F. M. ROSE (Lancashire).
Dr. RICHARD SCOTT (Edinburgh).
Dr. J. D. SIMPSON (Cambridge).
Dr. J. C. YOUNG (Belfast).

General Practice Steering Committee.

November 19, 1952.

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# ACTIONS AND USES OF METHORPHINAN


BY

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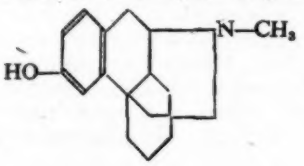
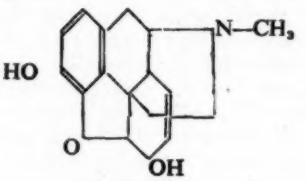
In an earlier paper (Glazebrook and Wrigley, 1950) it was pointed out that up to that time nothing had been found to equal the effectiveness of morphine in the ultimate control of severe pain. In this paper are presented experiences with methorphinan (" dromoran "), an analgesic which closely resembles morphine in its structure and activity and surpasses it in some respects. In particular, its ability to produce morning cheerfulness after an evening dose, instead of " hangover," is an outstanding attribute.

Methorphinan was synthesized by Schnider and Grüssner (1949), and its structural formula is given below with that of morphine.




methorphinan




morphine

It can be seen that methorphinan closely resembles morphine, it differing only in the absence of an oxygen bridge, a hydroxyl group, and a double bond.

Its pharmacology was first investigated by Randall and Lehmann (1950) and by Fromherz (1951), and its properties of analgesic potency, long duration of action, minimal respiratory depression, and wide margin of safety prompted extensive clinical trials of the racemic preparation in the U.S.A. (Zager *et al.*, 1949; Curreri *et al.*, 1950; Wilkins *et al.*, 1951; Stoelting *et al.*, 1951). Stoelting and his associates have used the substance in 1,500 cases.

The racemic form was at first used in clinical trials in this country, but isolation of the optically active isomers became possible and work with animals showed that the laevo form was much more active as an analgesic than the racemic preparation or the dextro-enantiomorph. Clinical trials demonstrated that there was no practical difference between DL-methorphinan and L-methorphinan, provided that the latter substance was given in two-thirds of the dosage found effective with the former. After this, the laevo form only was used, and further general statements in this paper concerning methorphinan relate to the laevo form.

L-methorphinan has an LD in mice of 45 mg./kg. intravenously, in rats of 135 mg./kg. subcutaneously, and in rabbits of 22.5 mg./kg. intravenously (Fromherz, 1951); thus, as with morphine, the toxicity varies with the species of the animal tested. When the Hardy–Wolff (1939) method of testing analgesic activity was used, 10 mg. of L-methorphinan per kg. gave greater and more prolonged analgesia than 50 mg. of morphine per kg. The substance has a slightly depressant action on respiration and it is spasmogenic to the intestine of a dog.

## Clinical Trials

The trials were confined to the relief of pain in patients in their homes and in hospital wards, and no method of

evaluation involving the production of pain by mechanical or other methods was attempted.

*Dosage.*—1.5 to 2 mg. was found to be the most useful first dose to employ, but severe cases usually required this initial trial dose to be increased to 4 mg. Slight tolerance occurred if the drug was taken for more than two weeks, and an increase in dosage of up to 50% then often became necessary.

The substance is usually effective by mouth, and injection of it was rarely required unless the patient could not swallow, was inclined to vomit, or had advanced disease with almost intolerable pain. Indeed, the occasional case gained greater comfort from tablets than from injections. This phenomenon is difficult to explain, except that slower absorption may encourage longer action, but it may help to dispel the illusion, long cherished, that patients are "fond of the needle."

It is not to be supposed that methorphinan is less dangerous than morphine because it can be given by mouth so conveniently, and it was found to be unwise, in the management of elderly patients, to double an initial dose found unsatisfactory. A more cautious increase is desirable, just as a dose of morphine would be increased from, say, ¼ to ½ gr. (11 to 16 mg.). The impression was gained during the trials that the substance, like morphine, was not tolerated so well when extensive liver damage or marked respiratory embarrassment was present, and it must not be used in subjects with advanced emphysema.

## Relief of Pain

Methorphinan failed to relieve pain in 16 of the 200 cases treated (8%); and afforded slight easement in 25 cases (12.5%). A gratifying analgesia was produced in the other 159 cases (79.5%), and many admitted to a deeper and more profound relief than could be obtained with morphine injections.

This series of 200 patients included 67 cases of malignant disease, 57 of chronic bone or joint disease, 20 of occlusive vascular disease, 15 of acute inflammatory lesions, 19 of chronic painful nervous disease, 14 of painful amputation stumps, 4 of radium burns, and 4 of coronary thrombosis.

*Duration of Analgesia.*—The average duration of analgesia given by 1.3 mg. was 8 hours (42 subjects); by 2 mg., 10 hours (68 subjects); by 2.6 mg., 11 hours (51 subjects); and by 4 mg., 14 hours (70 subjects). Often a patient would claim 24 hours' relief from a single dose given in the evening, when the pain was chiefly nocturnal.

*Effect on Morale.*—A striking clinical effect indirectly produced by the drug was an upswing of mood the morning after an evening dose had been given, when this had been successful in abolishing pain and the patient had suffered for a long period. The apathetic were seen to sit on the side of the bed and ask for breakfast; women demanded ribbons to tie up their hair; the undecided were able to make up their minds; the depressed began to hope that, after all, cure was perhaps possible. This effect contrasts with the stupor and "hangover" sometimes caused by frequent injections of morphine. It was not seen in 10 healthy subjects given methorphinan experimentally or in patients with lesser degrees of pain. There can be little doubt that it represents a natural reaction to the deep and refreshing sleep made possible by the relief of pain and is not a pathological euphoria.

## Side-effects

*Subjective Effects.*—These were experienced by 39 of the 180 patients who were given an initial dose of 2.6 mg. of methorphinan or less—an incidence of 21.6%. They mentioned an odd feeling coming on within ten to twenty minutes of administration and lasting for an hour or more. This was described as lightheadedness, a drunken feeling, a dizziness, a sensation as though all the limbs were numb and nerveless, a "whooziness," and in similar terms. Two admitted that they found this sensation pleasurable, and it was suspected that others also liked it. Eighteen became nauseated, and perhaps brought up a mouthful or two of fluid; three said that it caused headache; two aged patients lapsed into mental confusion; and two were unable to pass water while the sensation lasted. No complaint of these effects was made after the second or third repetition of the dose.

*Vomiting.*—This was severe and protracted in four patients (2.2%), and, unlike the milder symptoms of nausea and transient sickness noticed above, did not disappear with repetition or reduction of the dose unless an amount was given too small to be clinically effective.

*Respiratory Depression.*—This was reckoned to occur if the respiratory rate fell by more than two excursions a minute, and such a depression was seen in 9 of the 180 cases (5%). In four of the cases the depression in rate was accompanied by very shallow breathing, and the condition of the patients gave rise to anxiety. In two of the cases a barbiturate had been given as well as the methorphinan to induce sleep (pentobarbitone sodium, 3 gr. (0.2 g.), with methorphinan, 2.6 mg., in one, and amylobarbitone sodium, 3 gr. (0.2 g.), with methorphinan, 2.6 mg., in the other). Another man, dying of cancer of the throat, had been given morphine, ¼ gr. (11 mg.), some time before admission to hospital, and this had also caused extreme respiratory depression, which had given rise to anxiety. This fact was not known when methorphinan, 2.6 mg., was prescribed for him, and he collapsed with shallow breathing and cyanosis in an attack which his wife stated was identical with that seen after the morphine injection. In the fourth case, that of a woman with abdominal cancer involving much liver tissue, it was well known that either morphine or "omnopon," in the smallest practicable dosage, whether given by injection, by mouth, or by suppository, was not tolerated, and caused vomiting. By giving her half the usual dose of methorphinan (0.8 mg.) it was possible to relieve her pain to some extent for five hours without unduly depressing her respiratory centre, although a larger dose had this effect.

*Euphoria and Addiction.*—The cheerfulness displayed by patients 12 to 16 hours after a dose of methorphinan is not thought to be a pathological euphoria, and has already been described. In people who had been receiving morphine for weeks or months a smooth acceptance of methorphinan suggested that the latter substance could supply other needs of the habitual morphine-taker than simple analgesia. Some, however, were not so easily persuaded to give up their morphine for methorphinan. Both groups resented being put back to morphine once they had become accustomed to methorphinan, whether they liked the initial change to methorphinan or not. It was concluded that these manifestations were related to the superior analgesic powers of methorphinan and not to any addictive properties. On the other hand, two patients admitted that they found the odd feeling occurring soon after the administration of methorphinan pleasurable, and one of them said, further, that it gave him a feeling of superiority and power, while 32 other patients were judged to be mildly euphoric for an hour or two after taking the drug. It is unlikely that methorphinan, so closely resembling morphine in its structure and actions, will have addictive properties any the less.

*Side-effects with Larger Doses.*—4 mg. of methorphinan was given to 69 patients, and the incidence of respiratory depression increased to 33%. On the other hand, the "odd" feeling described above was noted by only six patients (8.7%) and mild nausea by seven (10%); while severe vomiting, headache, and retention of urine were not observed. This lowered incidence of side-effects other than respiratory depression is due to the fact that most of the 69 had already been given a smaller dose and were no strangers to the drug.

*Experimental Findings.*—Records were taken of the respiratory rate excursions in 10 normal subjects by means of a tambour attached to a chest-piece and writing on smoked paper. At the same time the movements of an intrajejunal balloon inflated with 20 ml. of air were recorded by means of another tambour. Each subject was given by injection morphine, ¼ gr. (16 mg.), and methorphinan, 3 mg., on different days. It was found that methorphinan depressed the respiratory rate and depth to approximately the same degree as the morphine. Both substances were also strongly spasmogenic to the small gut, there being little to choose between them in the height of the spasms recorded or the duration of the spastic state, which was about two hours.

### Comparison of Morphine with Methorphinan

When pain was the clamant symptom demanding relief methorphinan often seemed superior to morphine, both in the degree of analgesia produced and in its duration. In the present series, of 90 patients who had previously been given morphine by injection because of severe pain 76 (84.4%) preferred methorphinan, 7 (7.7%) thought the two about equal in effectiveness, and 7 (7.7%) preferred morphine.

An interesting comparison between the analgesic powers of morphine and of methorphinan is afforded by the experiments described above. Although the methorphinan-induced jejunal spasms equalled those caused by morphine, the latter were uncomfortable in three of the ten subjects, and painful in one of them, and the former went unnoticed.

Sometimes the clinical superiority of methorphinan was very striking. It was found possible, for instance, to provide considerable or complete relief for 24 hours with two or three 4-mg. doses in cases of advanced malignant disease with numerous secondary deposits, where previously three injections of morphine, ¼ gr. (16 mg.), together with three injections of methadone or phenadoxone, had failed to do more than lighten the gloom for short periods during the same time.

A most important advantage of methorphinan over morphine is its oral effectiveness, although, as has been previously pointed out, the fact that it is potent by mouth should not make for any less caution in its use than would be the case with morphine.

Methorphinan has not the soporific power of morphine, and for the control of anxiety and restlessness, rather than pain, such as occurs in left heart failure and haemorrhage, morphine is probably preferable. When insomnia is a prominent feature and is not entirely due to pain, morphine may be found a better drug.

Methorphinan did not suppress cough as well as codeine or methadone.

Methorphinan will control post-operative pain as well as or better than morphine, but insufficient evidence has been acquired to make dogmatic assertions regarding pre-operative medication. The impression has been gained that used for this purpose it does not quiet the patient as well as morphine, unless it is given in conjunction with a barbiturate.

### Barbiturates and Methorphinan

Methorphinan has no pronounced hypnotic effects and will not make patients sleep when factors other than pain are disturbing it. It might be thought worth while prescribing a barbiturate with methorphinan in these cases, but the combination is probably better avoided.

In exploring the possibilities of methorphinan by mouth as a pre-operative medication in place of a morphine injection it was found that a quieter induction to anaesthesia was obtained by adding pentobarbitone sodium, 3 gr. (0.2 g.), to the methorphinan. The first few cases did very well, but then a young man who had 2 mg. of methorphinan plus 3 gr. (0.2 g.) of pentobarbitone sodium by mouth suffered from a prolonged and serious degree of respiratory depression, and his condition gave rise to some anxiety for a while. Reference has already been made to four cases in which respirations became shallow and slow after the administration of methorphinan. Two of these cases were intolerant of morphine; the other two had been given 3 gr. (0.2 g.) of pentobarbitone sodium and 3 gr. (0.2 g.) of amylobarbitone sodium respectively, in addition to methorphinan.

After these experiences it was decided not to take the risk of prescribing a barbiturate in combination with methorphinan again.

### Summary

Methorphinan is an effective analgesic which can be given by mouth and usually affords longer and more complete relief from pain than morphine.

A striking characteristic is its ability to produce cheerfulness in pain-depressed patients the morning after an evening dose.

Its probable habit-forming propensities will demand the same precautions as are used with the morphine group.

Patients who do not tolerate morphine are likely to exhibit similar symptoms with methorphinan, although its smaller effective dosage may enable it to be used in these cases.

Methorphinan is not a hypnotic, and when insomnia and not pain is being treated it will not be found of much use.

It is unwise to prescribe methorphinan together with a barbiturate.

Methorphinan should not be used in cases of colic; while it will relieve the pain it will induce smooth-muscle spasm lasting up to two hours after its administration.

It is not so useful as codeine in the relief of painful cough, and the latter is therefore preferable for this purpose. Neither is it so good as morphine in the allaying of extreme anxiety and restlessness when pain is not a feature.

Methorphinan has one prime function, the relief of pain, and for this purpose may be found superior to morphine.

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# L-METHORPHINAN AS A SUPPLEMENT TO NITROUS OXIDE AND OXYGEN ANAESTHESIA

BY

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The use of pethidine as an adjunct to nitrous oxide and oxygen anaesthesia was first reported by Neff *et al.* (1947) in the U.S.A. and by Mushin and Rendell-Baker (1949) in Great Britain. The value of this anaesthetic technique has since been confirmed by several other workers, including Brotman and Cullen (1949). Brotman *et al.* (1950) have investigated the properties of other analgesics used by the same technique and have compared pethidine with morphine and a new synthetic substance, methorphinan. In the United States the racemic form of methorphinan is commercially available. The compound manufactured in this country and in Europe is the laevo-tartrate of methorphinan. Its pharmacology has been described by Randall and Lehmann (1950) and by Fromherz (1951). The drug is said to be more potent, weight for weight, than morphine, comparable analgesic doses having a longer action and causing less respiratory depression. The laevo-tartrate is about twice as potent as the racemic compound weight for weight.

When supplies of L-methorphinan ("dromoran") became available in this country it was decided to investigate its effects as an adjunct to nitrous oxide and oxygen anaesthesia in a series of 100 patients, all of whom were undergoing major surgery. The only contraindication to the use of the drug was the absence of suitable veins in the upper limb. The results were recorded on Nosworthy cards type 1. Premedication consisted of "omnopon," ¼ gr. (22 mg.), and scopolamine, 1/150 gr. (0.43 mg.), one and a half hours before operation. In patients over 60 years of age morphine, ¼ gr. (11 mg.), and atropine, 1/100 gr. (0.65 mg.), were given one hour before.

### Technique and Normal Findings

Anaesthesia was induced with thiopentone, 0.5 g., in all cases, the rate of injection being markedly reduced in poor-risk or older patients. Anaesthesia was maintained with nitrous oxide (5 litres a minute) and oxygen (2 litres a minute) with a Boyle anaesthetic machine in a semi-closed circuit. If muscle relaxation were required or an endotracheal tube were necessary, D-tubocurarine chloride or gallamine triethiodide was injected. (Note: L-methorphinan precipitates with thiopentone, but is miscible with D-tubocurarine chloride and gallamine triethiodide.)

A Gordh needle was inserted into a suitable arm vein, and an injection of L-methorphinan was given as soon as the effect of the thiopentone (with or without relaxant) on respiration was wearing off. This was usually about five minutes after the injection of thiopentone. Further injections of L-methorphinan and the relaxant were given through the Gordh needle as required. At the end of operation, if a relaxant had been given and its effects were still present, atropine, 1/100 gr. (0.65 mg.), intravenously, followed directly by neostigmine, 2.5 mg., was given. Before the patient left the theatre the pharyngeal reflex was tested and its presence or absence noted.

An exception to the above technique was made during the repair of hiatal hernia by the transthoracic approach. Anaesthesia was maintained with nitrous oxide (1 litre a minute) and oxygen (500 ml. a minute) with a Waters absorber with an intentional leak.

After intravenous injection in the anaesthetized patient the effect of L-methorphinan can be observed in three to five minutes. In this series the average case was given 0.5 mg., which was repeated if and when necessary. Less fit patients received an initial dose of 0.25 mg., repeated as required.

The average duration of effect of the first 0.5 mg. of L-methorphinan was 18 minutes (range 0–60, standard deviation 26.5). The average duration of effect of the first 1 mg. of L-methorphinan was 43 minutes (range 10–150, standard deviation 27.02). It was rarely necessary to exceed 1.5 mg. of L-methorphinan, and no case received more than 2 mg.; 69% of the patients received 1 mg. or less. No depression of respiration occurred in normal cases with the above dosage of L-methorphinan. In very poor-risk patients there was a slight depression, a reduction in respiratory rate rather than depth, but less marked than with pethidine. Bronchospasm was not seen. The impression was gained that the bronchial tree was dilated.

Of the cases treated with L-methorphinan 93% had an active pharyngeal reflex before leaving the theatre, and almost all were awake on return to the ward. The majority, once back in bed, fell asleep. Those that remained awake had good analgesia with no restlessness.

### Criteria

If during anaesthesia any respiratory or circulatory upset occurred, the case was not classified as "administration satisfactory."

"C.V.S. disturbance" includes surgical shock, haemorrhage, and fluctuations in pulse and blood pressure due to surgical manipulations, in addition to the effects of the anaesthetic on circulation.

"Respiratory disturbance" includes depression due to thiopentone and the relaxant, and tachypnoea, in addition to the effect of the drug under investigation. It also includes the effects of position.

During the post-operative period, if the patient had a cough with no other symptoms or signs he was assumed to have developed a minor respiratory post-operative complication. This strict classification resulted in a higher incidence than that usually reported.

If the patient was found to have a minor respiratory complaint in the pre-operative examination it was often difficult to determine, in the post-operative period, whether or not this complication had increased. In cases of doubt it was assumed to have done so, and the patient was classified as having a minor respiratory post-operative complication.

### Results

In Great Britain at present pethidine seems to be the drug of choice for supplementation of nitrous oxide and oxygen anaesthesia, and most anaesthetists are familiar with its action. The following results of a trial with L-methorphinan are therefore compared, where possible, with those obtained in an earlier series of 100 cases in which pethidine was used. In this series the average patient was given 25 mg. of pethidine, the dose being repeated as required. The sex and age distribution of the patients in each series are given in Tables I and II.

TABLE I.—*Sex Distribution of Cases*

| | L-Methorphinan Series | Pethidine Series |
|---|---|---|
| No. of males .. .. .. | 42 | 42 |
| No. of females .. .. .. | 58 | 58 |
| Total .. .. | 100 | 100 |

TABLE II.—*Age Distribution of Cases*

| | L-Methorphinan Series | Pethidine Series |
|---|---|---|
| 0–10 years | 0 | 0 |
| 11–20 ,, | 6 | 4 |
| 21–40 ,, | 26 | 26 |
| 41–60 ,, | 46 | 45 |
| 61 years+ | 22 | 25 |
| Total | 100 | 100 |

Table III shows the pre-operative state of patients in both series. They were classified as "good" only if there were none of the pre-operative complications shown in Table IV. This table refers only to 66% of the L-methorphinan series and to 70% of the pethidine series. It should be emphasized that more than one pre-operative complication might have occurred in any one patient.

TABLE III.—*Pre-operative Physical State*

| | L-Methorphinan Series | Pethidine Series |
|---|---|---|
| Good | 34 | 30 |
| Fair | 48 | 53 |
| Poor | 16 | 16 |
| Serious | 2 | 1 |
| Total | 100 | 100 |

TABLE IV.—*Incidence of Pre-operative Complications*

| Complication | L-Methorphinan Series | Pethidine Series |
|---|---|---|
| Incomplete data | 3 | 5 |
| Respiratory, major | 1 | 2 |
| ,, minor | 29 | 22 |
| C.V.S. | 30 | 34 |
| C.N.S. | 6 | 5 |
| G.U. | 4 | 3 |
| Gastro-intestinal | 3 | 8 |
| Metabolic | 6 | 13 |
| Total | 82 | 92 |

TABLE V.—*Incidence of Complications During Anaesthesia*

| | L-Methorphinan Series | Pethidine Series |
|---|---|---|
| Emergency | 0 | 1 |
| I.V. therapy | 20 | 22 |
| C.V.S. disturbance | 11 | 11 |
| Respiratory disturbances | 10 | 8 |
| Administration satisfactory | 78 | 80 |
| Total | 119 | 122 |

TABLE VI.—*Post-operative Complications*

| | L-Methorphinan Series | Pethidine Series |
|---|---|---|
| Technical | 0 | 1 |
| Respiratory, major | 2 | 3 |
| ,, minor | 39 | 21 |
| C.V.S. first 24 hours | 6 | 4 |
| C.V.S. later | 1 | 2 |
| C.N.S. | 1 | 2 |
| G.U. | 14 | 11 |
| Other | 6 | 4 |
| None of above | 41 | 62 |
| Total | 110 | 110 |

The complications arising during anaesthesia are given in Table V. The outstanding difference between the L-methorphinan and the pethidine series is the incidence of minor respiratory post-operative complications, and this is reflected in the "none of above" category (Table VI). For reasons already given this figure cannot be absolutely accurate, and there was a slightly higher incidence of pre-operative minor respiratory upsets in the L-methorphinan series.

In the L-methorphinan series there were six cases classified as "other." They were: obstructive jaundice which developed cholaemia; paralytic ileus; diarrhoea; numbness in arm (not used for intravenous injection or placed on arm-board) with no objective signs—disappeared without treatment; exacerbation of rheumatoid arthritis; and jaundice, from blood transfusion. In the pethidine series the four "other" cases consisted of a case of carcinoma of the uterus in which ascites developed; a case of jaundice following blood transfusion; and two cases of diarrhoea with blood and mucus in the stools. In the pethidine series the post-operative complication classified as "technical" consisted of minor trauma to the gums from laryngoscopy.

There was one death in the L-methorphinan series: the patient who had had a cholecystojejunostomy performed for obstructive jaundice developed cholaemia and died on the tenth day after the operation. There were two deaths in the pethidine series—one from pulmonary embolus on the tenth day, and one a few hours after operation from the inhalation of intestinal contents following the rupture of the cuff of an endotracheal tube.

The majority of patients classified as vomiting (Table VII) for "0–12 hours" vomited once or twice. In many cases this resulted from the early awakening and too early drinking, the first mouthfuls swallowed being immediately returned. Routine post-operative sulphonamide therapy was given in gynaecological cases. When post-operative vomiting occurred in such patients it was impossible to say whether the cause was the sulphonamide or the anaesthetic.

Table VIII shows the numbers in which the pharyngeal reflex was recovered in the theatre.

TABLE VII.—*Post-operative Vomiting*

| | L-Methorphinan Series | Pethidine Series |
|---|---|---|
| None | 60 | 64 |
| 0–12 hours | 29 | 28 |
| 12–24 ,, | 5 | 3 |
| Over 24 ,, | 6 | 5 |
| Total | 100 | 100 |

TABLE VIII.—*Return of the Pharyngeal Reflex in the Theatre*

| | L-Methorphinan Series | Pethidine Series |
|---|---|---|
| Reflex recovered | 93 | 85 |
| Reflex not recovered | 7 | 15 |
| Total | 100 | 100 |

The L-methorphinan and pethidine series were comparable as regards site and severity of operation, each series consisting of patients selected at random requiring anaesthesia for major gynaecological, orthopaedic, or general surgical operations. Since L-methorphinan is said to have a persistent analgesic action, it was thought that the duration of post-operative analgesia might be of interest.

Only 29% of cases required an analgesic during the first four hours after the last injection of L-methorphinan during the operation, 28% did not require any during the first 12 hours, and 17% required no analgesic. It was found that the duration of post-anaesthetic analgesia was not dependent on the dose of L-methorphinan given during the operation.

## Conclusions

L-Methorphinan is a powerful analgesic drug with a long action.

Its intravenous administration does not result in any untoward reactions.

By the intravenous route it is a satisfactory adjuvant to nitrous oxide and oxygen anaesthesia, when it behaves in a similar fashion to pethidine.

The drug is worthy of a more complete investigation in anaesthesia.

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# NEURINOMA OF THE STOMACH REMOVED BY TOTAL GASTRECTOMY

BY

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Neurogenic tumours of the stomach are infrequent, as is shown by the small number of cases reported in the available literature. Thus, Podlaha, Simon, and Uher (1934) mention only 2 out of 741 cases of benign tumours of the stomach. Minnes and Geschickter (1936) found that 10.9% of 931 benign tumours were of neurogenic origin. Judd and Hoerner (1936) observed one neurinoma in 50 cases. As regards the frequency of benign tumour of the stomach, Finesilver (1942) found 6 in a total of 43,200 *x*-ray examinations of the stomach carried out at a New York hospital. In Greece, Professor Courias (1946) reported one case of gastric schwannoma. Another case was operated upon by Dr. M. Maccas a year later. In the literature neurogenic tumours appear under different names, such as neurinoma, perineural fibroblastoma, schwannoma, neurilemmoma. It is not our intention to expound on the origin or the pathological classification of the neurogenic tumours.

The site of these tumours coincides with that of the malignant ones. Judd and Hoerner report that 66% developed in the antrum, 24% in the corpus, and 10% in the cardiac region. Their size varies from a chick-pea to a man's fist or more. Thus Sanguily and Blanco (1945) report a case of gastric schwannoma in which the tumour was 17 by 9 by 5 cm. in size and 580 g. in weight. Tierny (1934) reports a case in which a schwannoma was 250 g. in weight.

Symptoms depend on the size and position of the tumours. Small ones may remain latent, provided they are not ulcerated and not situated near the pylorus, in which case they are followed by symptoms of stenosis. The tension and torsion of pedunculated tumours situated in the pyloric region may possibly produce dilatation of the stomach accompanied by vomiting and visible peristalsis. These symptoms, however, may disappear when the tumour untwists. Larger tumours cause gastric disturbances—for example, pain after eating, vomiting, etc. These symptoms are usually more pronounced in the case of ulcerated tumours.

Mallory (1920) believes that ulceration is due to obstruction of the vessels, followed by necrosis of the mucosa. According to Judd and Hoerner, ulcerated tumours amount to 32%. West and Knox (1948) report that five out of six cases of gastric neurinoma were ulcerated. Another characteristic of these tumours is repeated bleeding. West and Knox report that four of their six cases had severe bleeding, and that in one case haemorrhage, though moderate, was continuous.

Anaemia is a characteristic symptom of neurogenic tumours; therefore Finesilver recommends an *x*-ray examination of the stomach of anaemic patients. According to Sanguily and Blanco, large tumours cause a weakening of the muscular tone of the stomach, resulting in slow evacuation of the contents, while small tumours stimulate peristalsis and raise the tone.

## Diagnosis and Treatment

Diagnosis is based on clinical examination and laboratory research. In the case of small tumours, apart from occasional slight muscular tension at the epigastrium, no other symptoms are found. Tumours producing stenosis of the pylorus are followed by the corresponding symptoms. Radiological examination of neurogenic tumours may show a filling defect. The regular contours of the displaced mucosa are usually preserved. In many cases a niche due to central ulceration of the tumour is seen. The folds of the mucosa are normal. Peristalsis persists at the region of the filling defect, while spasm is lacking. These characteristics are useful in the differential diagnosis from malignant tumours and ulcers. Spasm exists only in the case of tumours situated near the pylorus. Routine laboratory examination of the gastric juice, stool, etc., may disclose the presence of blood. Blood examination often demonstrates secondary anaemia.

Finesilver points out that in the case of anaemic patients achlorhydria, and a filling defect with regular contours of the stomach at *x*-ray examination, probably signify the presence of a benign tumour.

The treatment for neurinoma is, of course, surgical, in order to prevent the danger of haemorrhage and of malignant change. The latter possibility is estimated by Paul and Chapman (1945) at 10%. Malignancy is usually represented by neurogenic sarcomas. In a case of suspected malignancy, partial or total gastrectomy is recommended. Tumours causing pyloric stenosis are also treated by gastrectomy. In the six cases of West and Knox, three partial gastrectomies and three local excisions were done. Should a benign neurogenic tumour be diagnosed before operation, local extirpation is recommended by most authors (Lockwood, 1932; Finesilver, 1942; Paul and Chapman, 1945; Sanguily and Blanco, 1945; West and Knox, 1948; Weeder and Stayman, 1950). Weeder and Stayman, however, point out the frequency of recurrence. The difficulty in determining the benign nature of the tumour, the tendency to recurrence, and the possibility of malignant change are in favour of partial gastrectomy.

The size and situation of the tumour are an important factor in determining the type and extent of gastrectomy. In our case the large area covered by the tumour, and its extension to the cardia of the stomach, forced us to perform a total gastrectomy. The progress of anaesthesia and reanimation has greatly lessened the risks of total gastrectomy and post-operative complications are usually successfully treated. It is recommended, however, that such patients be closely followed up.

## Case Report

On March 7, 1952, a 40-year-old woman, complaining of weakness and vague abdominal discomfort, was admitted to the second surgical clinic of Athens University. The history dated back seven years. During this period she had suffered

from intermittent pains in the epigastrium, not aggravated by food. These complaints continued for approximately three years, after which a severe haematemesis occurred, presumably gastric in origin. Then and until May, 1951, her condition was satisfactory. At that time she started complaining of pain in the epigastrium, aggravated by food, and of acid eructations.

On examination the patient was pale and emaciated. The lungs, liver, heart, and kidneys were normal. A fixed hard mass the size of an egg was palpated in the epigastrium. Its upper end was covered by the left costal margin. The urine was normal. A blood count showed: red cells, 4,200,000; Hb, 84%; white cells, 6,800, with a normal differential count. The other laboratory tests were negative. *X*-ray examination of the stomach demonstrated a considerable niche, about 4–5 cm. wide, situated below the cardia on the lesser curvature. A clinical diagnosis of penetrative callous ulcer of the lesser curvature was made.

*Operation.*—On March 14, under thialbarbitone, nitrous oxide, and tubocurarine anaesthesia, a high median incision was made. At the lesser curvature of the stomach a tumour the size of a fist was found, extending from the cardia to the pylorus. As the diagnosis was malignant tumour, a total gastrectomy was performed. The spleen and the tail of the pancreas were also removed. The patient was returned to the ward in good condition. During the operation 500 ml. of blood and 500 g. of polyvinylpyrrolidone ("subtosan") were transfused.

The histological report stated: "Large neurinoma arising from the outer stomach wall of the lesser curvature. Ulceration at the middle of the tumour, about 3 cm. in diameter and 3 cm. deep. Chronic hypertrophic gastritis. No signs of malignancy were found. Diagnosis, neurinoma of the stomach."

The patient made an uneventful recovery and was discharged on April 3.


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Last month veterinary, public health, and laboratory experts met in Vienna to discuss measures for the control and eventual eradication of certain animal diseases which are transmissible to man. The conference, which was jointly sponsored by the United Nations Food and Agriculture Organization and the European Regional Office of the World Health Organization, was concerned with the zoonoses which are of special importance to European communities. Those discussed in most detail were rabies, brucellosis, bovine tuberculosis, leptospirosis, and Q fever. It was emphasized by speaker after speaker during the discussions that these diseases, although they differ in relative importance from country to country, are all of concern to large areas of Europe, where they not only cause widespread suffering and death among human beings but are also responsible for enormous losses in agriculture and animal husbandry. It is expected that as a result of the Vienna meeting a number of European countries now relatively free from rabies, for example, will enact suitable legislation to guard against the reintroduction of the disease to their territories.

# PRIMARY GENERALIZED INFECTION CAUSED BY HERPES SIMPLEX VIRUS


BY

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The condition described by Kaposi (1895) as a complication of eczema infantum and now called Kaposi's varicelliform eruption can be caused either by vaccinia or by herpes simplex virus. Thus Sommerville, Napier, and Dick (1951) have reported four cases proved to be caused by vaccinia virus, while herpes simplex virus has been isolated from clinically similar cases (Blattner *et al.*, 1944; Barton and Brunsting, 1944; Lynch *et al.*, 1945). The clinical disease resulting from infection with either of these viruses seems to be indistinguishable, and the name "Kaposi's varicelliform eruption" indicates a clinical picture which may be caused by at least two distinct viruses. Recently the terms "eczema vaccinatum" and "eczema herpeticum" have become current, and their use seems to be preferable.

In the case reported here the diagnosis was not difficult, the patient giving a history of eczema and of contact with a case of herpes simplex infection. The interest lies in the clear history of close contact being followed seven days later by a primary generalized infection with a skin eruption.

## Case Report

A single girl aged 20 had suffered from attacks of asthma and eczema of the face, hands, and wrists since she was 3. Periodically the exacerbations of her skin condition had necessitated admission to hospital. When she was 7 years old her condition had been diagnosed in the skin department at St. Thomas's Hospital as falling into the "eczema–asthma group of diseases." On January 10, 1950, when she was free from asthma but had a mild chronic eczema of her face and hands, she came into direct contact, through kissing, with her boy friend, who had a labial cold sore. On January 17 she was seen by her general practitioner, who noted an urticarial type of rash on her face. Two days after this the rash seemed to have become secondarily infected, the girl had a sore throat, and white patches were present on her tonsils. Treatment with injections of procaine penicillin was begun at home.

When seen in consultation on January 21, 11 days after exposure, the patient appeared ill and was having pain and difficulty when swallowing. She stated that the illness had started with a few small blisters at the side of her mouth and a painful swelling beneath the chin. Her temperature was 101.6° F. (38.6° C.), and the skin showed a pustular eruption, most pronounced on the face and on the dorsum of the hands and wrists—the areas previously affected by eczema. The eruption was also present on the neck, the upper part of the chest, the inner aspects of the forearms, the thighs, and the natal cleft. The pustules were of uniform size and were umbilicated except where they had coalesced. The underlying skin was red, and on the face markedly oedematous. The mucous membrane of the lips was affected, and there appeared to be lesions on the tonsils.

The conjunctivae were congested. Enlarged and tender submental, cervical, axillary, and inguinal glands were noted, but the spleen was not palpable.

The patient was admitted to hospital on January 21 and the penicillin injections were continued. For three days after admission she was pyrexial, but the next day, the eighth day of illness, her temperature was normal and her general condition very much improved. The pustules dried up, the scabs separated, and she was discharged on February 10, the 24th day from the onset of the illness. She was left with chronic eczema of the face and dorsum of the hands, but almost no trace of the lesions apart from some superficial scarring.

The patient had never been vaccinated, and, so far as she knew, had not been in contact with a recently vaccinated person before her illness started. No history suggestive of previous herpes simplex infection could be obtained. Eighteen months have passed since her illness, and she has not so far suffered a recurrence of herpetic infection.

### Laboratory Investigations

In cases of this kind it is necessary to isolate the causative virus from the patient's lesions by inoculating susceptible animals and to identify the virus by histological and immunological means. In addition, it is generally necessary to show that the patient's infection is a primary one by demonstrating the development of antibody in his or her blood serum.

Smears and cultures from a pustule and from the conjunctival exudate showed staphylococci. Further smears from lesions on the chin were stained by Gutstein's methyl violet method (Gutstein, 1937), but showed no evidence of vaccinia-like elementary bodies. A number of crusts from the patient's chin were extracted with buffered distilled water and the extract was inoculated on the chorio-allantois of 12-day chick embryos. After three days' incubation these membranes showed semiconfluent lesions which to the naked eye resembled those of herpes simplex. Sections of these showed no intranuclear inclusions, but degenerative nuclear changes were pronounced and later egg passages showed typical inclusions.

To confirm the identity of the virus, equal volumes of the crust extract were mixed with equal volumes (0.1 ml.) of immune serum (from a person subject to recurrent herpes) and with normal serum from a non-herpetic subject. The first serum was known to contain herpetic antibody, while the second had none. All sera were inactivated by heat before testing. The mixtures after standing at room temperature for half an hour were inoculated on to the chorio-allantois of 12-day chick embryos. The lesions resulting after three days' growth were counted. The results are shown in Table I. It can be seen that 98% neutralization of the patient's virus occurred in the mixture made with herpes immune serum. This result, together with the histological findings, indicates that the virus from the patient's lesions was herpes simplex.

TABLE I.—*Neutralization of Patient's Virus by Herpes Immune Serum*

| Inoculum | Lesion Counts | Mean |
|---|---|---|
| Normal serum + virus from patient .. | 84, 111, 112, 120 | 107 |
| Immune ,, + ,, ,, ,, .. | 4, 3, 2, 0 | 2 |

Several samples of the patient's serum were available for estimation of antibody. Complement-fixation and virus-neutralization tests were made, using these samples of serum and a known strain of herpes virus as antigen. The method of Hayward (1950) was used for the complement-fixation tests. The virus-neutralization tests were made on the chorio-allantois of chick embryos. The results are shown in Table II.

Antibody is seen to be already present in the first sample, taken on the seventh day of illness. The antibody titre continued to rise and there was a fourfold increase in complement-fixing titre from 1/32 on the seventh day to 1/128 on the twenty-seventh day.

TABLE II.—*Development in Patient's Serum of Neutralizing and Complement-fixing Antibodies for Herpes Simplex Virus*

| Serum Collected on | Neutralization Test. Percentage of Herpes Virus Neutralized by Serum in Dilutions of | | Complement-fixation Test; Serum Titres |
|---|---|---|---|
| | 1/10 | 1/100 | |
| 7th day of illness .. | 50 | 47 | 1/32 |
| 27th ,, ,, .. | 77 | 63 | 1/128 |
| Normal human serum (no antibody) .. .. | 0 | Not tested | Neg. 1/5 |

### Discussion

The recovery of herpes simplex virus from the skin lesions of this patient, together with the rise in antibody titre in the serum, makes it almost certain that this was a case of generalized primary infection with herpes simplex virus. Although a serum sample was not taken before antibody had appeared it is known that serum titres of persons liable to recurrent herpes infection do not show an increase in antibody after the recurrence of a herpetic lesion (Gajdusek *et al.*, 1952). The findings of those authors in this matter agree with our own unpublished observations in Liverpool.

We have no evidence that the spread of infection to the skin from the primary lesion in this patient was blood-borne, although this would seem likely in view of the almost simultaneous widespread skin eruption. It may be that when the primary infection with herpes virus gives rise to severe constitutional disturbance, as occasionally happens (Scott *et al.*, 1941), there is a generalization of the virus, with viraemia. Ruchman and Dodd (1950) recovered virus from the blood in a case of herpetic rhinitis, although they failed in other primary herpetic infections.

Possibly a transient viraemia in primary infections with herpes simplex virus is commoner than at present appears, and only in people whose skin is already damaged by eczema do lesions result from the viraemia. Kaposi himself noticed that, while the largest number of vesicles occurred on the already eczematous skin, smaller groups appeared on the previously intact skin of the neighbourhood, and Kipping and Downie (1948) reported a case of generalized herpes infection which cannot be described as Kaposi's varicelliform eruption, since the lesions occurred on normal skin in a non-eczematous subject.

Vaccinia virus is said to be present in the blood of most recently vaccinated persons (Herzberg-Kremmer and Herzberg, 1930–1), and this may explain those cases of Kaposi's eruption due to vaccinia virus which occasionally complicate vaccinations in eczematous subjects. The alternative explanation is that the eczematous lesions are infected by direct transfer of virus from the vaccination site. Boake *et al.* (1951) have described a case of recurrent Kaposi's varicelliform eruption due to herpes simplex virus in a person who was already herpetic when he became eczematous, and they favour the view that, in this rare case of recurrent eruptions, widespread skin infection in the first instance was probably the result of transference from a herpetic lesion on the lip. Which of these two possible modes of spread is the more usual is not known.

### Summary

A case of Kaposi's varicelliform eruption due to the virus of herpes simplex is reported. This virus was

recovered from the lesions, and there was a significant increase in antibody in the blood during the course of the illness.


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# TWIN PREGNANCY IN THE AFRICAN


BY

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A study of twin pregnancy in the African of Southern Rhodesia has been made with a view to determining any peculiarities which might be present. It is known that the primitive African in Mashonaland, the northern part of Southern Rhodesia, had a tribal custom whereby twins were put to death immediately after birth. Bullock (1950) states that the Mashona killed any twins which were born alive because of their supposed abnormality. In view of the frequency of their occurrence, it is difficult to see why they were regarded as such an abnormality.

## Material

The maternity unit of the Harari African Hospital admits all African women in labour from Salisbury and the surrounding areas. Many of these women are seen for the first time when in labour, but some two-thirds attend the hospital and municipal clinics for pre-natal care. A study has been made of 100 successive sets of twins born in hospital, where the details of the labour have been carefully kept. This hospital is staffed by qualified African midwives, with African maternity assistants in training. The African staff is supervised by a minimum of European nursing staff, who are largely concerned with administration and training of the pupils.

## Results

*Incidence.*—In 3,464 births which took place in the hospital there were 100 sets of twins born—an incidence of one set of twins in every 35 births.

*Position of Foetus.*—An analysis of the relative frequency of the positions of the foetuses is shown in Table I, and comparison is made with a much larger series—Leonhard's 1,840 cases, quoted in most textbooks.

TABLE I.—*Percentage Incidence of Positions of the Foetuses*

| Position of Foetus | Harari Hospital (98 Cases) | Leonhard (1,840 Cases) |
|---|---|---|
| Vertex; vertex | 33·7% | 38·53% |
| Vertex; breech | 19·4% | 21·19% |
| Breech; vertex | 28·5% | 14·35% |
| Breech; breech | 12·2% | 10·76% |
| Vertex; transverse | 4·1% | 8·32% |
| Transverse; vertex | 0·0% | 0·87% |
| Breech; transverse | 2·1% | 4·29% |
| Transverse; breech | 0·0% | 0·77% |
| Transverse; transverse | 0·0% | 0·92% |

*Distribution of Sex.*—In the 100 sets of twins studied there were twin males in 25, twin females in 29, and one of each sex in 46. Unfortunately the placenta was not kept each time for careful study, and it is impossible to state how many of these 54 cases of similarly sexed twins were identical.

*Interval Between Births.*—In 89 sets of twins the birth of both was spontaneous, and the interval between the birth of the first and that of the second twin is analysed in Table II.

TABLE II

| | Interval Between Birth of Twins in Minutes | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 60 | 80 | 110 | 130 | 160 | 190 |
| No. of twins | 14 | 21 | 20 | 10 | 4 | 6 | 1 | 4 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 |

The intervals are divided into five minutes, and the average was found to be 25 minutes between the first and the second twin. One remarkable case was not included in this analysis because of the extremely prolonged interval between the birth of the twins—namely, 136 hours.

*Obstetrical Complications.*—Caesarean section was carried out on three occasions—once for placenta praevia Type III, once because of a previous classical caesarean section, and once because the patient was admitted with a prolapsed oedematous cervix, which had been lacerated through outside interference. A prolapse of the cord occurred on two occasions with the first twin, and six times with the second twin. Forceps delivery, because of delay in the second stage, was carried out twice on the first twin and once on the second twin. On one occasion there was a retained placenta with a post-partum haemorrhage which required manual removal, and on five occasions an internal version was carried out because of a transverse lie in the second twin.

*Stillbirths and Neonatal Deaths.*—Among the 200 babies born there were 25 stillbirths and 24 neonatal deaths. The foetal mortality is therefore 24.5%. In Table III the foetal

TABLE III

| | Foetal Mortality |
|---|---|
| Harari Government Hospital (1950–2) | 24·5% |
| Simpson Memorial Pavilion, Edinburgh (1946) | 17·9% |
| St. Mary's Hospitals, Manchester (1944) | 16·0% |
| Liverpool Maternity Hospital (1945) | 11·9% |

mortality is compared with that from hospitals in Britain, and it will be seen that the foetal mortality in this series is from 50 to 100% greater than in British hospitals. All the neonatal deaths occurred in babies weighing less than 5 lb. 8 oz. (2.5 kg.), and in general their death was due to prematurity.

*Incidence of Prematurity.*—In 198 babies resulting from twin births whose birth weight was known, 143 (71%) were less than 5 lb. 8 oz. (2.5 kg.). Houghton and Ross (1952) found the incidence of prematurity to be 16.6% for African singleton births in this district. Table IV shows the percentage weight distribution of different categories and reveals that, although the stillbirths and live births appear to be as common when less than 5 lb. 8 oz. (2.5 kg.) as when more than that weight, the neonatal deaths all occurred in the lower weight group.

TABLE IV.—*Percentage Distribution of Birth Weight*

| | More than 5 lb. 8 oz. (2·5 kg.) | Less than 5 lb. 8 oz. (2·5 kg.) |
|---|---|---|
| All babies | 28·5% | 71·5% |
| Stillbirths | 30% | 70% |
| Neonatal deaths | 0% | 100% |
| Live births | 27% | 73% |

*Congenital Abnormalities.*—Among the 200 babies the only foetal abnormalities found were supernumerary digits in two cases and a macerated foetus in six. Of the latter six cases only one mother had a positive serological reaction for syphilis.

## Discussion

An extensive investigation of twin pregnancy throughout the world was carried out by Das (1934). He found the incidence to be one twin birth in every 90 births. In the white races in the United States of America the incidence is 1 in 88, while that of the coloured races is 1 in 67. Engelhorn (1925) investigated the incidence in various countries: Russia 1 in 41.8; Sweden 1 in 81.6; Switzerland 1 in 84.5; France 1 in 99.7; and Spain 1 in 113.6. The incidence in the Africans of this district is one in 35. This incidence is about twice that found in the coloured races of the United States of America.

It has been said that the incidence is greatest where fertility is greatest, and climate has been adduced as an influence, but Das came to the conclusion that climate did not seem to have any influence. It is difficult to estimate the incidence of sterility in the African, but Willcox (1949) thought that as salpingitis of gonorrhoeal origin in the African was common the effect so far as sterility is concerned may be appreciable. Gelfand and Ross (1949) found the incidence of bilharziasis to be very high amongst Africans, and this disease produces salpingitis and so renders many of them sterile. It would seem that, although the African woman's fertility is lowered by bilharziasis and gonorrhoea, the incidence of twin birth is very high, and it is possible that the tropical climate might have some effect.

Study of Table I shows that the incidence of the position of the foetuses in this series of twins follows that of Leonhard's series, except that a breech followed by a vertex is commoner than a vertex followed by a breech. This might well tend to prolong the labour, as the breech is not such a satisfactory dilating agent as a vertex, and there is a greater tendency to early rupture of the membranes. In my experience this does not appear to be the case, and any such tendency to delay may be overcome by the powerful contractions of the uterine muscle which are seen in the African woman.

Among the 100 sets of twins analysed in this series were 54 sets of like twins and 46 sets of unlike twins. Browne (1944) states that an analysis of over 700,000 sets of twins showed a proportion of 17 sets of like-sex twins to 10 sets of unlike sex. The present series shows a proportion of 12 sets of like sex to 10 of unlike sex.

The interval of time between the birth of the babies in 89 cases in which they were left absolutely to Nature showed an average of 25 minutes. From Table II it will be seen that 10 minutes and 15 minutes are the commonest intervals. The longest interval recorded at this hospital is that of a woman who gave birth to the second twin 136 hours after the birth of the first. Both babies were normal at birth and no apparent cause could be found for the delay in the second birth. Both babies were born spontaneously as vertex presentations. After the birth of the first child the pains did not return within the normal interval of time, so the woman was allowed to carry on a perfectly normal life and the baby was put to the breast. It was thought that suckling might initiate uterine contractions, but this did not take place until five and a half days had elapsed.

Russell (1952) comments on the foetal hazards associated with twin pregnancy. He found in a series of cases in the Aberdeen Maternity Hospital that wastage of child life from stillbirths and neonatal deaths was 16%. In this series the foetal mortality was 24.5%, representing 25 stillbirths and 24 neonatal deaths. It will be seen from Table IV that in the case of the stillbirths approximately the same proportion were less and more than 5 lb. 8 oz. (2.5 kg.), as in the case of all the babies, but in the case of neonatal deaths they were all less than the standard weight used for judging prematurity. It may be concluded that in the case of the stillbirths the weight of the baby does not appear to be of great importance, but, from the point of view of the neonate, prematurity is an all-important factor in the prevention of foetal wastage.

Baird (1945) has drawn attention to the influence of diet on prematurity, and the People's League of Health (1942), in a carefully controlled experiment, proved that vitamin supplements were of great importance in the production of babies of higher birth weight. This factor of adequate diet would seem to be of even greater importance so far as twin pregnancy is concerned. Table IV shows that more than 70% of the babies born were less than 5 lb. 8 oz. (2.5 kg.).

Houghton and Ross (1952) found that 16.6% of African singleton births were premature, and attributed this high incidence to dietetic deficiencies. The high incidence of prematurity in twin babies is almost certainly connected with the poor diet which many Africans subsist on, a diet which is particularly deficient in protein and vitamin content. Improvement in the African diet would diminish the incidence of prematurity in both the single and the plural pregnancies and largely prevent the foetal wastage.

Kerr and Moir (1949) report that malformation or maceration was noted in 15% of a series of twins at Glasgow Royal Maternity Hospital. In the present series the abnormalities encountered amounted to 4.5%. Supernumerary digits, which constituted two of the abnormalities, are extremely common in the African baby. In only one of the six cases of macerated foetus was the patient suffering from a syphilitic infection. Jelliffe (1952) believes the incidence of congenital abnormalities to be about the same in the African as in the European, and that is the experience in this hospital. There seems to be no reason, apart from chance, for the smaller incidence of congenital abnormalities in this series.

## Summary

In the series studied there were 54 sets of like twins and 46 sets of unlike twins.

The average interval between births was 25 minutes in spontaneous deliveries.

The incidence of twin births in the African of Southern Rhodesia is 1 in 35 births.

The incidence of the positions of the foetuses is in close agreement with the standard works except that a breech followed by a vertex is commoner than a vertex followed by a breech.

The foetal mortality was 24.5%; the neonatal deaths were all in premature babies. It is considered that improved diet would reduce the foetal wastage.

Congenital abnormalities were found in only 4.5% of the series.

Thanks are due to Dr. A. W. Husband for help in compiling the figures and to Dr. D. M. Blair, Acting Secretary of Health, for permission to publish this paper.

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# CONTROL OF THE CONCENTRATION OF OXYGEN IN TENTS FOR PREMATURE BABIES

BY

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AND

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Oxygen tents are in general use in hospitals to treat premature or sick babies. It has been feared that too high a concentration of oxygen may be harmful (Smith, 1950), and various writers have considered whether retrolental fibroplasia, which causes much blindness among smaller premature babies, has not been brought about by giving them too high concentrations of oxygen (Minton and Cole, 1951; Bembridge *et al.*, 1952). Szewczyk (1951) suggests that it is the sudden diminution of oxygen concentration which occurs when a baby is removed from an atmosphere of 60% to 70% oxygen which induces the disease.

Obstetricians and paediatricians alike have been anxious not only because they do not know the cause of retrolental fibroplasia but also because in most cases they do not know the oxygen concentration to which the babies have been exposed. It was usual to regulate the standard Queen Charlotte oxygen tent flow-meter to 2 or 3 litres a minute; but recently this has been commonly reduced to 1.5 litres a minute. Jackson (1951) has shown that the same type of tent can attain an oxygen concentration of 70% with a flow-meter reading of only 1 litre of oxygen a minute.

Our tests with the tents in everyday use in the nurseries of our maternity department have shown that with the flow-meters registering from 1 to 2 litres of oxygen a minute the oxygen concentration may be as low as 30% or as high as 80%. The object of this paper is to describe a simple method of obtaining the desired concentration with certainty.

## Causes of Variations

There are without doubt great differences in the leakage rates of tents. Some tents have a port 1.5 cm. in diameter with a sliding metal cover. The hinged lid fits tightly on to sorbo seating, which is air-tight. In an old tent these parts may give rise to leakage, and small defects may appear near the hinges of the lid.

The manner in which the cot and its tent are made up must affect the oxygen-leakage rate from the tent. Also, the oxygen concentrations will be unpredictable if the flow-meter does not give an accurate reading. The flow-meters supplied with the tents have a small scale registering a maximum of 11 litres a minute, so that when the lower end of the scale, about 1 or 2 litres a minute, is chiefly used it would be surprising if the meters were uniformly accurate. The larger the baby in the tent the greater will be the loss of oxygen due to respiration.

## Apparatus and Methods Used

The Queen Charlotte tent consists of an oval bottomless box of transparent plastic mounted on a metal frame with vertical sides. The top of the box is in the form of a hinged lid. Oxygen is supplied through a metal tube connected through rubber tubing by way of a flow-meter to a standard oxygen cylinder. The B.O.C. oxygen analyser was used to read off the oxygen concentrations in the tents. This interesting instrument gives an instantaneous reading on a scale. It operates on the Pauling principle, which depends on the magnetic properties of oxygen.

Each sample for analysis was taken by a rubber tube passed through the port, or an aperture specially made, to a point in the centre of the tent well away from the oxygen supply tube. The oxygen analyser was kindly lent by the research and development department of the British Oxygen Company Ltd., whose scientific staff assisted throughout. Many readings were taken of various tents, and the following results are given as typical.

Tent A was set up in working conditions resting direct on the cot mattress with only a rubber sheet and a single thickness of cotton sheet intervening. It contained a healthy baby weighing 6 lb. 2 oz. (2.8 kg.). The oxygen concentration was recorded every two minutes with the flow-meter reading 1 litre a minute, and the results were plotted as a curve V in Fig. 1. This was repeated with the flow-meter reading first 2 litres and then 3 litres a minute to give curves W and X in Fig. 1. The same tent A was set up next day under apparently similar conditions and curves Y and Z were plotted for a flow of 4 and 5 litres of oxygen a minute respectively.

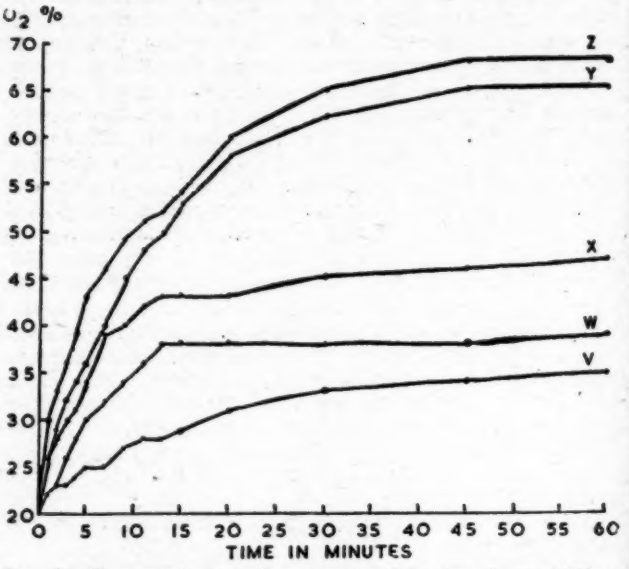


FIG. 1.—Oxygen concentrations produced in tent A, containing baby weighing 6 lb. 2 oz. (2.8 kg.). Curves V–Z = oxygen flow-meter readings of 1–5 litres a minute respectively.

It will be noted that each curve rises steeply until it reaches a plateau in 45 minutes, after which the concentration of oxygen increases by only unit percentages and certainly by less than 10%. The form of this curve is so consistent that it can be accepted that a single estimation of the oxygen concentration in the tent, which has been kept closed for 45 minutes with the oxygen flowing at a uniform rate, will give a *calibrating* oxygen percentage for that reading on the flow-meter. Thus if we wished to give a baby 40% oxygen, and after 45 minutes with the flow-meter at 1 litre a minute the reading was 35%, we should know that a proportionate increase in the flow was necessary. A further reading within the ensuing 45 minutes would then show the result of the adjustment.

## Comparison of 10 Tents

Nine other tents, B to K, were then tested under similar working conditions to those used for tent A and using various rates of oxygen flow from 1 to 5 litres. Some tents

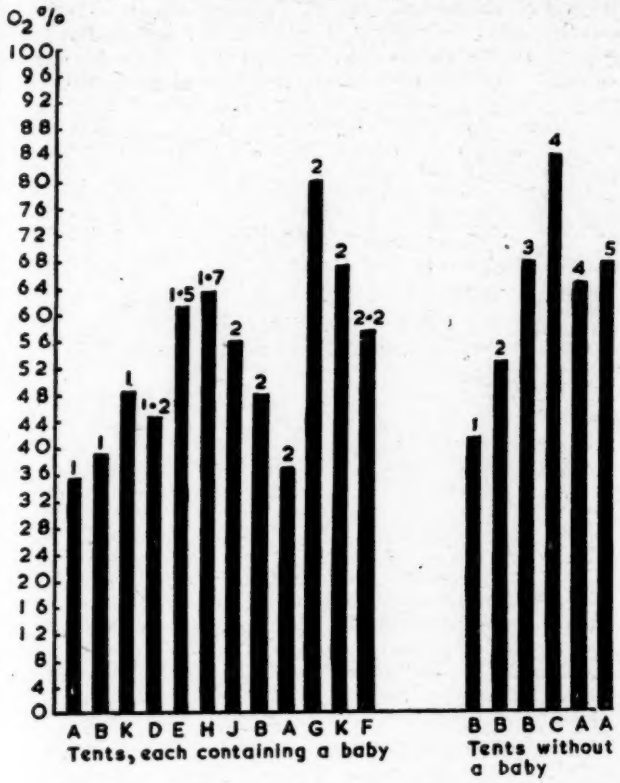


FIG. 2.—Comparison of the varying concentrations of oxygen produced, showing no reliable relation to the recorded flow of oxygen. Columns represent concentrations of oxygen produced after 45 minutes' constant flow in 10 different tents A–K. The flow-meter reading in litres a minute is given at the top of each column.

contained a baby and others did not. Curves of similar form were obtained, reaching a constant concentration after about 45 minutes, but the concentration of oxygen was not by any means proportional to the flow of oxygen recorded on the flow-meter.

Fig. 2 shows the concentrations of oxygen reached after 45 minutes' constant flow in the 10 tents. It will be seen that, working at 2 litres a minute with a baby inside, tent G reached to a concentration of 81%, tent J 56%, tent B 48%, and tent A only 38% oxygen. In other words, the oxygen concentration in the various tents does not have a constant relationship to its flow-meter reading. The concentration can be ascertained only by analysis, and the simple way is to take a *single calibrating test 45 minutes after the tent has been closed and the flow-meter set.* Further analysis will be necessary whenever there is any doubt or if the working conditions are changed.

### Flushing the Tent

The next investigation carried out was to find whether it is possible to shorten the 45 minutes' running which is required for the oxygen content of the tent to become constant. It was found that, by running the flow-meter at three times the intended rate for the first five minutes after the tent is closed and then reducing the flow to normal, the constant concentration of the oxygen is reached in 30 minutes. Fig. 3 shows the effect of this five minutes' flushing at treble flow. The five minutes must be accurately timed, because at this rate of flow very high concentrations could be reached.

The single tests can be carried out quickly by the pyrogallol method, and our pharmacists have devised a simple method of doing this which they describe at page 1340 of this issue.

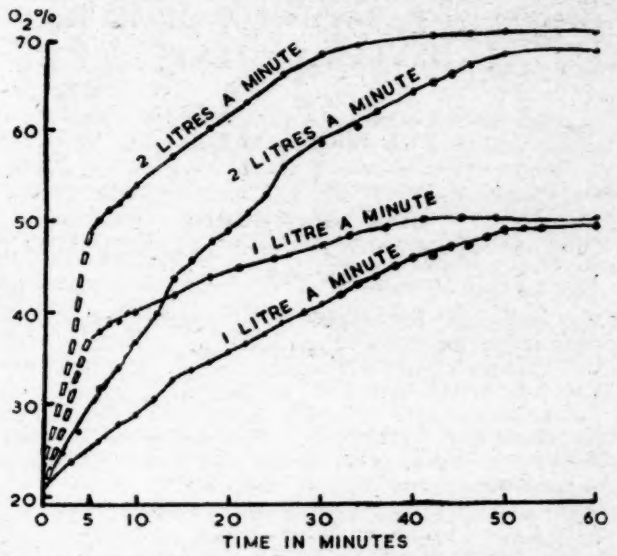


FIG. 3.—Concentrations of oxygen obtained, showing effect of flushing with triple flow (interrupted lines) during the first five minutes.

### Conclusions

Nurses make up tents in different ways, flow-meters are variable, babies are of different sizes, and tents do not leak equally; therefore, whenever a tent is set up there is a new and unpredictable arrangement requiring a calibration of its own.

Calibration is done by taking a single oxygen analysis of the tent after it has been working with a constant flow for 45 minutes.

To shorten this calibration time the tent may be flushed with three times the chosen flow for five minutes, and then the analysis of the oxygen should be made after the flow has been normal for a further 25 minutes.

We are grateful to Dr. A. Bracken and his staff of the British Oxygen Company Ltd. for considerable help.

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The medical officer of health and port medical officer of Plymouth, Dr. T. Peirson, describes methods for the purification of oysters in a recent article in *The Medical Officer* (November 1). About 50 years ago several outbreaks of typhoid fever were traced to the consumption of sewage-contaminated shellfish, and public confidence in the safety of oysters, mussels, and cockles was severely shaken. Confidence, in Dr. Peirson's words, "has not yet recovered. Sewage-polluted shellfish are a very real source of danger to the public health." Nowadays local authorities have powers to close oyster beds which are likely to endanger the public health, and, as an additional safeguard, the Fishmongers' Company carries out careful and systematic bacteriological sampling of shellfish coming to the markets in the City of London. Sometimes a local authority will permit the sale of shellfish from a polluted laying if first the oysters are cleansed at an approved establishment. The usual method of purification is as follows: first, external mud is removed by hosing; then the oysters are bathed twice in purified sea-water, subjected to further hosing, and their dejecta drained off; then they are placed for a short period in chlorinated sea-water to sterilize the outside of the shells; and finally they are packed in containers which themselves have been sterilized with chlorine.

# SIMPLE APPARATUS FOR MEASURING OXYGEN IN TENTS

BY

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The percentage of oxygen in an oxygen tent can be measured by the following method. The only requirements are : (1) an alkaline solution of pyrogallol ; and (2) an all-glass Luer syringe with 2 ml. graduated in fifths and fitted with an airtight cap. This cap can be made by cutting off the mount from a Luer needle and closing the end with solder. The plunger of the syringe must fit well and should be used wet, so as to make a close seal.

To measure the oxygen the cap is removed from the syringe and a sample of the tent's contents drawn into it by withdrawing the plunger well past the 2-ml. mark on the syringe barrel. The cap is quickly replaced, and the syringe can then safely be carried over to the pyrogallol solution, which should be kept near the sink. The syringe is held nozzle downwards, the cap removed, and the plunger carefully lowered until it reaches the 2-ml. mark. The syringe nozzle is then dipped below the surface of the pyrogallol solution and a small amount drawn into the syringe. The exact amount is unimportant, but 0.5 ml. will suffice for the syringe we describe. Care must be taken not to admit air. The cap is refitted whilst the syringe is held still pointing downwards.

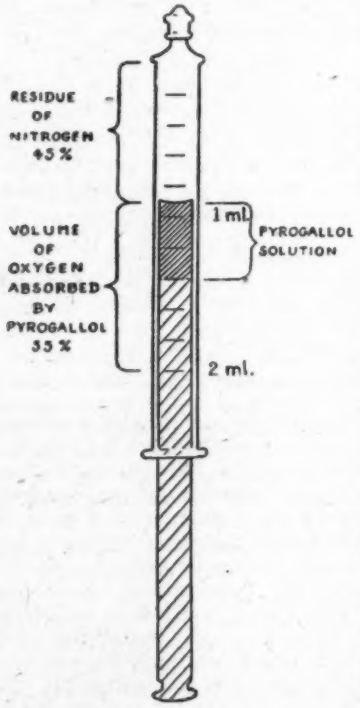


FIG. 1.

The syringe is then tilted backwards and forwards a few times and finally held with the nozzle pointing upwards. The plunger will have been sucked in to take the place of the oxygen absorbed by the pyrogallol solution (Fig. 1). The reading is then taken from the top of the fluid. It is important that the reading be taken from the bottom of the meniscus, otherwise in a small syringe it will be too high. The fluid is dark and the meniscus not always easy to see.

Any all-glass syringe of the Luer type can be used provided it is graduated into fifths, tenths, twentieths, or hundredths, to enable the rise in the fluid's surface to be readily converted into a percentage. We found a tuberculin syringe with 1 ml. graduated in hundredths to be unsuitable, because with such a narrow barrel the weight of the plunger or the barrel makes a 5% error in the reading whether the syringe is held by the barrel or by the plunger.

The pyrogallol solution consists of 5% pyrogallol and 10% NaOH in distilled water. The solution should be made up freshly each day and kept in an airtight bottle. For convenience in the wards we have made a stand resembling an inkwell stand, consisting of a block of wood with three circular sockets drilled into it to hold three bottles and with a groove cut in front in which to rest the syringe (Fig. 2). The first bottle contains 20% NaOH solution, the

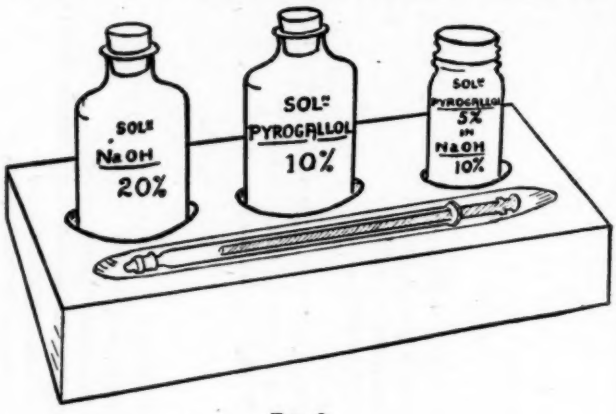


FIG. 2.

second 10% pyrogallol, and the third is a screw-cap bottle with a rubber washer fitted inside the cap to make it airtight. Each morning approximately equal parts of the caustic soda and pyrogallol solutions are put into the screw-cap bottle and mixed. If the bottle is well closed each time immediately after being used the solution will remain active for 24 hours or more.

# Medical Memoranda

## Thrombocytopenic Purpura Recurring in Successive Pregnancies

Patterson (1946) has drawn attention to two types of thrombocytopenia—a chronic type in which there is a history of an abnormal tendency to bleed and persisting evidence of thrombocytopenia, and an acute type in which recovery is thereafter complete. Various authors (Mosher, 1923 ; Polowe, 1944 ; Patterson, 1946) have reported that in the chronic type of the disease in pregnancy the hazards to the mother and foetus are considerable, the maternal mortality in the cases recorded being 55%. Chalmers (1948) described an acute case of thrombocytopenic purpura in which the condition was mild and had no serious complications. Shipton (1950) reported a further case of the acute type necessitating splenectomy and repeated blood transfusions, and gave a comprehensive review of the literature. The patient made a complete recovery.

The following case of thrombocytopenia has two points of interest. It occurred on the only two occasions when the patient was pregnant, and in the first pregnancy it was associated with a toxaemia.

Toxaemia occurring in chronic thrombocytopenic purpura has been regarded as a serious complication on account of the possibility of placental infarction, giving rise to a severe ante-partum haemorrhage.

### CASE REPORT

The patient, aged 24, gave no history of previous attacks of purpura or haemorrhages. The periods were normal.

*First Pregnancy.*—This progressed satisfactorily until the 37th week, when she developed a toxaemia, being admitted to Guy's Hospital on April 21, 1950. The toxaemia improved with rest in bed. On April 27 purpuric spots were found over the abdomen and she had a slight epistaxis. The following day the rash had extended over the arms and lip. The spleen was not palpable and Hiss's test was

negative. A blood picture showed a normocytic anaemia with thrombocytopenia. The haemoglobin was 56%, the red blood cells numbered 2,800,000, and the platelets 66,000 (chamber count). On May 2 a transfusion of 1 pint (570 ml.) of fresh blood was given and labour was induced by rupture of the membranes so that delivery might take place when the benefit of the transfusion was at its optimum. Labour lasted 38 hours and ended with the spontaneous delivery of a live male infant weighing 7 lb. (3.2 kg.). The loss following delivery was 8 oz. (230 ml.). The infant showed no evidence of purpura, and progressed satisfactorily. On May 8 a further blood picture showed that the platelets had risen to 140,000 per c.mm. There was now no clinical evidence of purpura. She was discharged on May 16 in good health. No further manifestation of purpura occurred until her second pregnancy in 1951.

*Second Pregnancy.*—On June 19, when she was five months pregnant, purpuric spots appeared over the right shoulder and she was admitted to Guy's Hospital. The spleen was not palpable, and Hiss's test was again negative. A blood picture showed the platelets to be reduced to 80,000 per c.mm and morphologically normal. After a week the rash faded and she had no further attacks before delivery on October 11. The delivery was spontaneous and a live female child weighing 7 lb. 11 oz. (3.5 kg.) was delivered. The loss was 8 oz. (230 ml.). Three days later she developed purpuric spots over the shoulders and bruises appeared over the left forearm and left leg. A blood picture showed the platelets to be 90,000 per c.mm. and some giant forms were seen; haemoglobin, 83%; red cells, 4,200,000. The infant was healthy and showed no signs of purpura or haemorrhages. On November 27 the platelets had risen to 180,000 per c.mm. and she was discharged in good health.

### COMMENT

In thrombocytopenic purpura the danger of haemorrhage from the placental site or from lacerations of the birth canal has been discussed by previous authors, and there can be little doubt that the precaution of giving fresh blood before labour in all cases is justified. A transfusion was given in the first pregnancy of the present case, but not in the second. On reflection it would seem that its omission in this second pregnancy cannot be logically defended despite the uneventful delivery.

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## Successful Caesarean Section after Death from Miliary Tuberculosis

In this century post-mortem caesarean section has been reported in some 80 cases. About 15 were pulmonary tuberculosis (Kronick, 1950); the remainder were due to toxaemia (Dobbs, 1948), rupture of an aneurysm (Johnson and Frank, 1946), cerebral haemorrhage, pneumonia, heart failure, poliomyelitis, and spinal analgesia (Walker and Matthews, 1950). The following report shows that the operation is worth doing and also how deceptive a case of miliary tuberculosis can be during pregnancy.

### CASE REPORT

A pregnant woman aged 21 was admitted to hospital on March 20, 1951. She complained of severe headaches, increasing in intensity for about a week. There was a history of vomiting for a week and of inability to pass urine for the last two days. She had not attended her antenatal clinic or called in her own doctor, and the expected date of delivery was in four weeks' time. In 1949 she was normally delivered of a full-term infant in the same hospital, although she was very hysterical. There had been no past illnesses.

On examination she was pale, afebrile, restless, and uncooperative. Abdominal palpation showed a bladder enlarged to the umbilicus. After the bladder had been emptied by catheter a pregnancy of about 36 weeks was palpable, presenting by the breech. The foetal heart was heard. The blood pressure was 140/96, the heart was normal, and there was no oedema. Respiratory system: equal air entry; no abnormal signs detected. Central nervous system: fundi, N.A.D.; cranial nerves were normal; all reflexes were present, equal and normal. There was no neck rigidity. The blood count was within normal limits. The blood Wassermann reaction and Kahn test were negative. A catheter specimen of urine was normal.

*Treatment and Progress.*—In view of the hypertension the patient was treated as a case of pregnancy toxaemia. The retention of urine, which continued, was thought to be a hysterical manifestation. Nevertheless the patient became more irrational. Her temperature rose to 99° F. (37.2° C.) on March 21. At 1.20 p.m. the next day coma began suddenly, with cyanosis and shallow respirations. Her blood pressure was 180/110, with a bounding pulse. There was irregular dilatation of the left pupil, which was larger than the right. Neither pupil reacted to light. All limbs were flaccid, and reflexes were absent. The foetal heart was heard. At 2 p.m. the patient died, and approximately five minutes afterwards a living male child weighing 5 lb. 1 oz. (2.3 kg.) was delivered by caesarean section. Until a pathological examination was made it was presumed that the patient died from an intracranial catastrophe such as cerebral haemorrhage.

*Post-mortem Report.*—Spare woman with numerous bruises on shins. Respiratory system: a few adhesions were present on the left side. There were generalized miliary tubercles in both lungs, with a primary Ghon lesion in the left lung. Tubercles were seen on the pleural coverings of the lungs. The cardiovascular system was normal. The mouth, tongue, oesophagus, and intestines were normal. Tubercles were present on the peritoneal surface of the liver. The spleen showed numerous tubercles. The endocrine glands were normal, as were the ureters and bladder. The uterus was enlarged to the post-parturient size and contained the placenta, which was easily removed and which contained two pale areas that were probably infarcts but might have been tubercles; these were sent for section. Brain: there was noticeable flattening of the convolutions, and round the base was a greenish gelatinous exudate typical of tuberculous meningitis; adhesions in the Sylvian fissure and between the frontal lobes were present; sections revealed a moderate degree of hydrocephalus. On microscopical section of the placenta a single indubitable tubercle was seen.

*Progress of Infant.*—The infant's weight on discharge on April 9 was 6 lb. 2 oz. (2.8 kg.). The Mantoux test was negative at 1:10,000. On November 17 an *x*-ray film of the chest was reported to be normal. The infant's weight on January 31, 1952, was 18 lb. 7 oz. (8.4 kg.).

My thanks are due to Mr. C. R. Macdonald, to Dr. R. B. T. Baldwin, the pathologist, to the medical officer, Dr. R. E. Holme, and above all to the prompt help of the nursing staff at the Glanford Hospital.

MARY HELMER, M.B., B.S.

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# Reviews

## MEYER'S PAPERS

*The Collected Papers of Adolf Meyer.* Volume I: Neurology. Volume 2: Psychiatry. Volume 3: Medical Teaching. Volume 4: Mental Hygiene. General Editor, Eunice E. Winters. (Pp. 693, 674, 577, 557 respectively. £12 set of 4 volumes.) Baltimore: The Johns Hopkins Press. London: Geoffrey Cumberlege.

Adolf Meyer never wrote a book, though many have been written about him and his work. It was often difficult to persuade him to release a paper for publication, for he always hoped that he would find time for second thoughts. Those who have profited from his teaching have had cause for fear that some of his unique contributions to the study of brain and mind and the treatment of the psychologically sick might die with him. The care and sympathy with which this collection of papers has been compiled has averted this tragedy. Meyer's pupils have spread his influence throughout the civilized world, and the material which they used and treasured in the form of study outlines, dissection guides, and reprints is now available to all.

The 250 papers included, which cover the period from 1890 to 1945, allow a general view of Meyer's work that was hardly possible before. At first sight the four volumes are, like *Hamlet*, "full of quotations," and it is then possible to realize how much unacknowledged Meyer there is in the psychiatric discussions of to-day. Many fashionable concepts which appear to arise logically from current thought are here presented as asides to some other theme under discussion. The views which he advanced in 1906 on dementia praecox are still tenable in the light of the mass of clinical and laboratory data which has accumulated since. Meyer, with his common-sense approach and his extraordinary capacity for spotting work likely to be of permanent value amidst a rising tide of psychiatric literature, threw out enough ideas in his working life to inspire a vast volume of research, and this is still far from complete. Quite a large proportion of these ideas are to be found in his papers, and many still live in the verbatim reports of conferences, which are not included in this book.

The papers are arranged in four large volumes devoted to neurology, psychiatry, medical teaching, and mental hygiene, each with an introduction by one of his pupils. The choice of Sir David Henderson, who writes the introduction to the volume on psychiatry, is a generous recognition not only of Meyer's acknowledgment of the contribution of British psychiatry to the development of his work, but also of the fact that the influence of his teaching has been felt at least as much outside the United States as in the country of his adoption.

To work with Adolf Meyer one had first to learn his language, and it is fortunate that editing has not marred the highly characteristic means of expression of a man who thought far faster than he could clothe his ideas in words, and who, when he did not think in abstractions, thought as a Swiss. In spite of his ready adoption of American idiom and German portmanteaux words, together with neologisms of his own, his capacity for getting an idea across is unique. It is a pity that words of which he himself was fond did not always appeal to other specialists in the same field, and few of his followers now call themselves ergasiologists, for instance.

Meyer's school and its work form an epoch in the development of psychological medicine. With Freud he shared a distrust of the unthinking application to human problems of scientific method and purely neuronal hypotheses. But he was equally distrustful of psychodynamic theorizing. "Unfortunately," he said, "Science has been built up with such an exclusive interest in Physics and Chemistry . . . . that conceptions of Science became and remained unduly mechanistic and unyielding with an unnecessary expurgation of the larger concepts of mind and soul that we meet in ourselves and in our fellow-beings." Meyer's work went far to correct that trend. In psychiatry his preoccupation was with the "experiment of nature" and the reaction of the individual as a whole to the milieu in which he lives, and his interest was wider and his approach less dogmatic than that of his great contemporary, Freud. As a teacher he was more self-effacing; he sought to make his followers think for themselves, each according to his special interests. He appreciated that there were other points of view than his own, and his sense of humour saved him from engaging in polemics. In time he stood between the exact clinical formulations of Kraepelin and the present epoch of neurological speculation, and in thought his position lay between the objectivity of the behaviourists and the psycho-analytic stress on emotional life. Although his writings seem surprisingly up-to-date he is unfashionable among psychologists in one respect—he believed that men's behaviour was influenced by reason.

There have been several attempts to put on record the spirit of Meyer's teaching, but this collection of his own writings conveys much more. It will for a long time be one of the most important books in any psychiatric library even if its cost will reduce the number of individual subscribers. Editing and presentation are in excellent taste.

ALEXANDER KENNEDY.

## PSYCHIATRY IN GENERAL PRACTICE

*Psychiatry in General Practice.* By C. A. H. Watts, M.D., D.Obst.R.C.O.G., and B. M. Watts, M.B., B.S. Foreword by J. D. Wyndham Pearce, M.D., F.R.C.P.Ed., D.P.M. (Pp. 228. 12s. 6d.) London: J. and A. Churchill. 1952.

This instructive and stimulating book is in effect a plea, based on experience, for the wider application of psychiatry by general practitioners to the many cases in their practices for which it is the only rational treatment. Dr. C. A. H. Watts, it appears, grasped his opportunity to learn and practise the simpler psychiatric techniques in the South African Medical Corps during the last war, and has since employed the knowledge and experience so gained in a large general practice in a mining district of Leicestershire. In collaboration with Mrs. Watts, he here tabulates the results of a three-year survey and presents his conclusions with many illustrations from case notes, both military and civil.

Psychotherapy, Dr. Watts suggests, falls, like surgery, into three grades—major, minor, and intermediate. Every general practitioner practises, and must practise, the minor or "first-aid" kind; major psychotherapy, if he is wise, he will delegate to the expert psychiatrist; it is with patients and problems needing "intermediate" psychotherapy that Dr. Watts is chiefly concerned. These are far too numerous to be treated even by an army of specialists, nor do they require eclectic treatment; yet to fob them off with a placebo and a label of "functional" is poor medicine, unrewarding to both doctor and patient. A general practitioner with an average allowance of human sympathy and understanding and a little modern psychology can tackle them with success if he has the will and can make the time. Dr. Watts faces this last crucial problem squarely, comparing the average time needed for radical treatment of a neurosis with the total time given to an obstetric case from booking to puerperium. Both add up to three hours, and the authors draw the obvious conclusion.

They go on to describe the investigation, treatment, and disposal of the common neuroses and psychoses and the forms in which they present themselves, with many illustrative examples. They do not pretend that a little psychotherapy will rid a practice of all its chronic nuisances. A hard core will remain. But they do suggest that "G.P. psychiatry," properly applied, will restore some neurotics to permanent good health, others to long periods of fair health and working capacity, and will at the same time decrease the fret and increase the interest and satisfaction of the doctor's work. A few misprints and misspellings need correction, and in places the writing might with advantage be more

simple and direct, but these are small flaws in an original and valuable piece of work. General practitioners, especially entrants to practice, perhaps encountering the common neuroses for the first time, will find here much to encourage and help them.

L. W. BATTEN.

## THE HOMOSEXUAL

*Society and the Homosexual.* By Gordon Westwood. Introduction by Dr. Edward Glover. (Pp. 191. 9s. 6d.) London: Victor Gollancz. 1952.

This wise, courageous, and sober study of a highly important social phenomenon can be whole-heartedly commended; moreover, Dr. Edward Glover's excellent introduction can be enjoyed as an unusually fine piece of English prose-writing, quite apart from its content. The title would perhaps have been better as "Society and the *Male* Homosexual," for, apart from a very few casual references, the author does not discuss the problem of homosexuality in the female.

The average medical practitioner in this country is almost as ill-informed on sexual psychology and its social implications as the rest of the literate population. This readable book should provide him (or her) with an opportunity of remedying his ignorance—at least of one significant aspect of psychosexuality in its social setting. It will come as a matter of surprise to many that, on homosexual grounds, rather more than one in three of the male population over the age of 15 has at one time or another rendered himself liable to imprisonment and social disgrace, as the law stands to-day, and that, at a low estimate, 650,000 males in England and Wales alone are altogether incapable of leading a love-life which is not exclusively homosexual.

The author, supporting his conclusions with weighty quotations from the writings of eminent physicians and jurists, maintains that the laws dealing with homosexuality are not only woefully unjust but also wholly inefficient, and he makes several sensible suggestions for their possible amendment. He further contends that the ferocious, emotionally over-determined condemnation of aberrant patterns of sexual behaviour associated with Anglo-Saxon cultures derives for the most part from the unconscious repression of the same potentialities by more normally constituted individuals. However, the present moment (when, for example, so many otherwise responsible people are shrilly and irrationally clamouring for the reintroduction of flogging) cannot, alas, be regarded as propitious for the dispassionate review of the laws that attempt to regulate our sexual *mores*.

E. B. STRAUSS.

## RADIOLOGY OF THE ACUTE ABDOMEN

*Roentgen Examinations in Acute Abdominal Diseases.* By J. Frimann-Dahl, M.D., Ph.D. (Pp. 323; 305 figures. £3 17s. 6d.) Springfield, Illinois: Charles C. Thomas. Oxford: Blackwell Scientific Publications. 1952.

Dr. Frimann-Dahl has written an exhaustive monograph on an important subject. To many, the radiological study of the acute abdomen means fluid levels and gas-distended coils. Dr. Frimann-Dahl takes us far into the variants of these two classic signs and their significance, and adds to them many other less known *x*-ray features.

The first chapter is on technique, and there follows one on the various *x*-ray appearances in the normal abdomen, including the abdominal wall. The third section, a very readable one, is on the general pathological findings. In the discussion of the source and absorption of intestinal gas the author emphasizes the major importance of swallowed air as the source. In this section he also discusses the appearances of pneumoperitoneum, ascites, fluid in the intestine, and associated signs in the chest. The remainder of the book, comprising three-quarters of its pages, is devoted to a detailed description of the *x*-ray signs in almost every acute and subacute abdominal condition that can be brought to mind. This section is admirable for reference, but is necessarily somewhat repetitive.

This is a book for the radiologist and the abdominal surgeon. The format and illustrations are admirable, and the author is to be congratulated on gathering together a great deal of information in one volume of reasonable size. The price is, to British pockets, not quite so reasonable.

S. COCHRANE SHANKS.

## CONDUCTED TOUR OF STATISTICS

*Facts from Figures.* By M. J. Moroney. (Pp. 472. 5s.) Harmondsworth, Middlesex: Penguin Books. 1952.

In the opening words of the preface, "this book attempts to take the reader on a conducted tour of the statistician's workshop." The tour crosses the frontiers of almost all branches of statistics as well as those of many branches of mathematics, starting with the elementary and ending with the most advanced methods and techniques. *En route* appear many novel presentations of fundamental ideas and illuminating explanations of common difficulties, as well as a great many formulae. There is much material which text-books on statistics often omit, but there is also much that is better done in other books.

The early chapters are most enjoyable, and the popular presentation in the opening sections is enlightening to the reader with previous knowledge. Mathematical notation is introduced early, and formulae and equations grow more and more numerous as the book proceeds. After the opening chapters the book moves on rapidly to difficult concepts for which the ground is not adequately prepared. Each chapter follows through one topic from its elements to technicalities of increasing complexity and to most advanced methods. The novice can understand only the beginnings of most chapters, and the "intermediate" statistician will find difficulty in understanding to the end.

The weaknesses of the book are manifold, and some of them are serious enough to make this an unsuitable book for the earnest beginner. First, it strikes a poor balance between the branches of statistics of general interest and those specially applicable to production and quality control. Secondly, there are other gaps in addition to those in subject-matter. Whoever the reader, he will look for missing links in explanation. Too often the explanations of difficult points are inadequate or even absent, their place being taken by phrases like "the algebra of the first form tells." Inadequate explanation of difficulties often accompanies tedious elaboration of simple points.

The third great weakness is that of carelessness. There are mistakes in figures, in tables, in diagrams, and in text; they reveal a negligence in proof-reading which must be severely censured. They are a serious matter in a book which aims to teach the reader by encouraging him to work through chapter and examples. When, for example, distributions are wrongly grouped and percentages wrongly calculated (as on p. 128, where values lying within the range of mean ± S.D. are found to be 58%) the hard-working reader is unlikely to gain confidence on obtaining a different result. Reference made to a non-existent diagram, tables incorrectly headed, the word "not" omitted from a sentence (with some importance in meaning)—these are examples of lack of regard for the reader. The published errata refer to only a section of the book, and correct only a small proportion of the errors even in this section. Most heinous crime of all, some of the answers given at the back of the book are wrong. The novice who thinks that he has mastered a method and works out an example will lose more than he learns when he tries to achieve the printed answer.

It is highly important that the fundamentals of statistics should be made intelligible to the non-mathematical specialist in other fields, the teacher, the physician, and the voter. *Facts from Figures* starts out on this road, but soon strays into traditional paths. Even so, it serves a useful purpose in pointing the way.

LILLI STEIN.

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## THE COLLEGE OF GENERAL PRACTITIONERS

Although the general practitioner of to-day is disquieted about his position in the medical firmament it is vastly superior to what it was 100, or even 50, years ago. The apothecary and the barber-surgeon, the general practitioners of the Middle and later Ages, were looked upon as little more than menials. The apothecary's success in establishing his right to prescribe as well as compound drugs was crowned by the passing of the Apothecaries Act of 1815, "which secured a minimum qualification in medicine for the family practitioner and penalized one kind of unlicensed practice in England."[1] Little more than 100 years ago the Court of Examiners of the Apothecaries Society complained that the term apothecary ill-described his functions and urged that he "should be designated the general practitioner of medicine."[1] The Medical Act of 1858 continued the Society's position as an examining body and recognized its licence as a registrable qualification. The Medical Act of 1886 defined a qualifying examination as one in medicine, surgery, and midwifery, and thus in broad terms defined the scope of work of a "General Practitioner of Medicine." In his interesting thesis[1] of 30 years ago Dr. N. Gerald Horner, recently Editor of this *Journal*, bore witness to the growth of specialism at the turn of the century, observing that "one effect of splitting up the field of medicine into plots of intensive cultivation must be to rear a narrower kind of practitioner." And he referred to those who feared that the family doctor was in consequence of this in danger of becoming "a mere medical shopwalker indicating the appropriate department." As remedies he presciently recommended hospital work, graduate instruction, district laboratories, and multiple partnership.

The complaints now recur with renewed force, and the remedies proposed, by and large, are much the same. One more—advocated 100 years ago—finds cogent and authoritative support in our opening pages this week in a report advocating, indeed heralding, a College of General Practitioners. It is, in fact, already in being. In an article entitled "The General Practitioner of the Future," published in the *Journal* eight years ago,[2] Dr. Frank Gray, advocating a diploma in general practice, wrote thus: "The next question is who is to award the diploma? It might be one of the universities, but there would be advantages for quite other reasons in having a College of General Practitioners, and resolutions at the last Annual Representative Meeting of the B.M.A. seem to suggest that there is a movement in this direction." And now the idea has been acted upon. A group of general practitioners, supported by an ex-Minister of Health, Mr. H. U. Willink, an ex-Chief Medical Officer of the Ministry of Health, Sir Wilson Jameson, a professor of public health, Professor J. M. Mackintosh, two distinguished surgeons, and an obstetrician, formed the steering committee, whose report on the project we now publish. Mr. Willink has acted as chairman and Dr. J. H. Hunt as secretary, to whose energy and enthusiasm the project owes so much. As we observed in a leading article last year: "If one is to judge by the volume of support the suggestion has received, it should be examined with the idea of finding reasons for, rather than against, its establishment"—that is, for a College of General Practitioners. The reasons are now set forth, and the aims and ideals of the new College. The Founders, as we are justified in describing the steering committee, urge the present need for "an organization run by practitioners for practitioners, to ensure that the best achievements and traditions of general practice are preserved, and that the best of future developments are encouraged." They have resisted any move that might bring them under the wings of the three Royal Colleges as a "Triple Faculty." They insist, rightly, on independence and autonomy. They see the establishment of the College of General Practitioners as a move towards the reintegration of medicine in Britain, culminating, they hope, in the formation of a British Academy of Medicine in which their College will be represented. As is historically apposite, the Society of Apothecaries has provided the new College with a temporary home.

The steering committee, having completed its task, gives way to a "Foundation Council" composed of its 10 general-practitioner members; 11 more are to be added during the course of next year. A memorandum and articles of association have been drawn up. From January 1, 1953, Foundation Members and Associate Members may join on the conditions described in the report. The College is determined not to remain in glorious isolation in the Metropolis. To prove itself a live force throughout the country it intends to form "regional faculties in the university cities and other large centres of population." All this will take time, effort, and money, and in the meanwhile it must be asked what the College intends to do. The intention is succinctly described in the

[1] "The Growth of the General Practitioner in England," by N. Gerald Horner. Cambridge M.D. thesis, 1922.
[2] *Supplement to the British Medical Journal*, May 27, 1944, p. 121.

report thus: "The College will give a lead to general practice." This lead is to be educational and academic. The College will encourage the entry of general practitioners into hospitals, press for the direct access of practitioners to laboratory and *x*-ray facilities, and assist in the training of medical students for general practice: the suggestion is made in the report that experienced practitioners should be on the staffs of teaching hospitals. Another aim is the promotion of postgraduate teaching of practitioners. All these are commonplace aims and have been urged for some time by the British Medical Association. The support of the new College will add fresh impetus in these desired directions. What will, perhaps, arouse most interest is the statement that encouragement of general-practitioner research will be a major responsibility of the College. Reference is made to a "college research organization . . . equipped to help with the consolidation of clinical records and material for practitioners and their study groups all over the country, and to advise with regard to techniques for the collection and analysis of this material and the necessary controls." This is an ambitious aim, and its development will be watched with the highest interest. It is disappointing to see a hint that the College of General Practitioners may in time decide to issue a diploma. Will this mean still another examination in a diploma-ridden profession? We hope not. That some kind of distinction will be sought is inevitable, and perhaps the soundest might be election to fellowship of the College on criteria similar to those adopted by the Royal College of Physicians. If the new College escapes the diploma market will it keep out of medical politics? It intends to do so. "The function of such a College," the report states, "as its name clearly indicates, must be academic and educational, not political. . . ." But the history of its elderly sisters shows that the name College affords no immunity to political activity. If it succeeds in establishing a firm foothold in the world of general practice the new College will inevitably find itself dragged into medical politics. The Foundation Council may find it wise to consider this possibility and at the outset to seek some form of liaison with the British Medical Association.

Whether or not the introduction of the N.H.S. has stirred into consciousness the latent discontents of general practitioners, there is no doubt that the rapid evolution of medical science has brought general practice to a parting of the ways. Unless something is done to reorient his training, undergraduate and graduate, to medicine as it is to-day—more exact and exacting, more of an applied science than an empirical art—the general practitioner risks becoming what Horner called "a mere medical shop-walker." It is clear that the moving spirits behind the College of General Practitioners have decided to meet the challenge of the times, and not too soon. Those who care for the welfare of medicine will thank them for their enterprise and foresight, and urge them forward along the path they have courageously taken.

## THERAPEUTIC USES OF VITAMIN E

It is now thirty years since Evans and Bishop, of California, postulated the existence of vitamin E, at first known as the "anti-sterility vitamin," and nearly fifteen years since it was isolated and synthesized. Although there is ample evidence to show that it is necessary in animal nutrition, there is no clear-cut proof that it is needed by man. It is certainly present in human tissues and is excreted like other vitamins, but no human deficiency syndrome due to lack of it has ever been produced. In those species requiring it vitamin E probably acts as an antioxidant in all the tissues of the body. During the last twenty years many attempts have been made to establish therapeutic claims for the vitamin, but none of them has been well substantiated. In the 1930's several workers used it for the prevention of recurrent abortion and with the help of statistics put up what appeared to be a good case for its use. But the general experience of gynaecologists is that treatment of recurrent abortion with vitamin E gives results that are in no way superior to those obtained by rest, reassurance, and a regulated life, and at the moment it has no place in the gynaecological armamentarium. Its use in the treatment of threatened abortion and the toxaemia of pregnancy has likewise been forgotten.

After it was shown that muscular dystrophy occurred in animals fed on diets deficient in vitamin E, attempts were made to cure neuromuscular disease in man by administering large doses of the vitamin, it being assumed that the aetiology of the human disease was similar to that of the deficiency syndrome in animals. The pathological appearances may be similar in both, but to assume in consequence that the aetiology is the same is surely irrational. Many workers have tested the claims made since 1940 that vitamin E is beneficial in the treatment of neuromuscular disease, but they have been unable to substantiate them. Failure to do so has been criticized on the grounds that the dosage has been too high or too low, or that therapy has not been continued long

[1] *British Medical Journal*, 1949, **2**, 1378.
[2] *J. clin. Endocr.*, 1949, **9**, 89.
[3] *J. Bone Jt Surg.*, 1949, **31B**, 325.
[4] *Lancet*, 1949, **2**, 1128.
[5] *Med. Clin. N. Amer.*, 1946, **30**, 221.
[6] *British Medical Journal*, 1949, **2**, 1382.
[7] Ibid., 1952, **1**, 1328.
[8] *Ann. N.Y. Acad. Sci.*, 1949, **52**, 390.

enough. It is unlikely that the dosage is as critical as the advocates of vitamin E would have us believe. It did not take twelve years to establish the value of insulin in diabetes, liver in pernicious anaemia, or penicillin in infections, and it would seem that sufficient time has now elapsed in which to test the effectiveness of vitamin E in the treatment of the neuromuscular diseases and abortion.

At the International Conference on Vitamin E held in New York in 1949 E. V. and W. A. Shute claimed that large doses of vitamin E are beneficial in the treatment of heart disease, vascular diseases such as thrombophlebitis and thromboangiitis obliterans, and even in the treatment of severe burns, frostbite, nephritis, and diabetes. These workers believe that it is effective not by virtue of its vitamin activity but by its pharmacological action. The multiplicity of unrelated conditions, with no common underlying pathology, for which the vitamin has been recommended raises the question whether it has any place in therapeutics at all. In 1950 the Council on Pharmacy and Chemistry of the American Medical Association concluded that vitamin E is of no value in coronary heart disease, hypertension, or rheumatic heart disease, and this view receives the support of many carefully controlled investigations. There is still no evidence that the concentration of vitamin E in the blood plasma is low in those diseases it is reputed to benefit or that the diet of patients with these diseases is deficient in the vitamin. Moreover, the cardiac condition of animals deprived of vitamin E is not analogous to human cardiac degenerations, which are certainly irreversible by the time they are diagnosed clinically. Treatment for these conditions with the doses recommended—200 to 500 mg. given daily for indefinite periods—cannot be justified on economic grounds for such a dubious remedy.

Menopausal flushing and sweating can usually be controlled by oestrogens, but the stimulating effect on the genital tract and breasts is sometimes a drawback. Vitamin E was first used by Shute in 1937 to control these flushings, and more recent investigations would seem to indicate that here it is of some benefit. McLaren[1] used $\alpha$-tocopherol for the prevention of flushing, sweating, and insomnia after an artificially induced menopause and obtained relief in 60% of his cases; previous treatment with a placebo gave relief in only 2%. Finkler[2] relieved 53% of his cases with tocopherol therapy. Although it rests on an empirical basis, the use of vitamin E for this purpose seems to be worth further investigation.

According to Boyd,[3] of Manchester, who has treated over 1,000 patients suffering from intermittent claudication with 400 mg. of $\alpha$-tocopherol daily, the results are little short of those obtained by sympathectomy. He emphasizes that no improvement may be noticed for three months and that in the average case there is no response for six weeks. Boyd's results have been analysed statistically by Ratcliffe,[4] who reports that they are "highly significant." The Manchester results, based as they are on such a large number of cases, cannot be lightly dismissed.

In 1946 Steinberg[5] claimed that vitamin E causes a slow softening and stretching of the fibrous bands of Dupuytren's contracture. A number of workers have since investigated this claim and it is still highly controversial. Russell Thomson[6] obtained beneficial results in the later stages of the disease, but nevertheless submitted some of his patients to surgery. Richards[7] on the contrary, giving vitamin E as the sole form of treatment, observed no improvement in any of his cases. Unfortunately many of those investigating the use of vitamin E in this condition do not mention whether administration of the vitamin was the sole treatment, or whether massage, active or passive stretching, wax baths, or splints were used. Vitamin E in the treatment of Dupuytren's contracture must still remain *sub judice*.

A condition related to Dupuytren's contracture, Peyronie's disease or penile fibrosis, is also said to have been improved by vitamin E. Scardino and Scott[8] treated 27 cases with mixed tocopherols and obtained beneficial results in half of them. Treatment lasted for as long as eighteen months in some cases. No controls were observed.

On the whole the results of vitamin-E therapy have been disappointing. The treatment of menopausal flushes and peripheral vascular disease with the vitamin is certainly worth further carefully planned trials, but the other suggested uses are unlikely to repay further investigation.

## GRAMMAR SCHOOL SELECTION EXAMINATIONS

The examinations for selection to grammar schools, taken by most English children between the ages of 10½ and 11½, are arousing controversy at present. The 1944 Education Act aimed at "parity of esteem" among the various types of secondary schools, but in fact, by abolishing fee-paying, led to grammar-school entry becoming wholly competitive. Thus most middle-class parents who cannot afford public-school fees, but who wish their children to have a good secondary education leading to a white-collar job or possibly to a university, now realize that their children's careers may be blighted by failure at a single day's examination. In many parts of the country their anxiety is heightened because there is room only for 7 to 10% of all children of appropriate age in the local grammar schools, although the figure for the whole of England and Wales is around 20%, and in some areas much higher. Moreover, while they

are used to conventional written and oral examinations, they are naturally suspicious of the modern intelligence and attainment tests, the purport of which they do not understand.

The details of the selection process vary considerably under different education authorities, but typical is a system described by Mr. W. S. James in a report just issued.[1] A set of three 45-minute tests—of intelligence, English attainment, and arithmetic—is constructed and tried out beforehand by psychologists—for example, by the research staff at Moray House, Edinburgh. Preliminary trials are needed to show that every question in the tests is effective and to provide norms or standards of performance for both the oldest and the youngest children in an age group. (Were this not done, the 11½-year-olds would have roughly three times as good a chance of winning a grammar school place as the 10½-year-olds.) New tests are prepared every year, and these are kept secret until the examination is held, though all teachers and many parents know the kind of questions to be asked and try to prepare the children for them. Often an extra intelligence test, or two or more complete series of tests, are given on separate occasions. The scores on all tests are converted to quotients, with an average of 100 and a range from about 140 to 60, and these are usually totalled. Sometimes the selection is decided purely by the total. Thus if there are places for 20% of the children and 20% score 345 or over, then these children are admitted and all those scoring 344 or less are excluded. But the unfairness of so mechanical a system is generally realized, and extra consideration is given, say, to the 5% or so above and 5% below the borderline. Account may be taken of primary school teachers' estimates of their pupils' abilities; indeed, these often receive equal weight with, or may entirely supplant, the English and arithmetic tests. An essay may be set, or the grammar school concerned may re-examine or interview the doubtful candidates and make its own choice.

Mr. James's collaborators describe a number of such procedures. Thus there is more flexibility, and certainly a great deal more care is taken over each individual pupil, than most critics realize. Moreover, almost all education authorities have arrangements for later transfer to grammar schools of pupils who are outstanding in the modern schools, usually at the age of 13. Unfortunately, this second chance is less effective than it should be, because, as Dr. A. F. Watts shows,[2] the average modern-school pupil tends to fall behind in ability to pass examinations.

Research has demonstrated clearly that a successful grammar school career depends mainly on: (1) aptitude, (2) previous schooling, (3) character, including perseverance, emotional stability, and interest, and (4) encouragement at home, though in a few cases failure may result from defects of health. How far do the procedures mentioned above cover these qualities? Intelligence tests are not a perfect measure of innate ability, but the fact that they are partly influenced by schooling and upbringing does not make them any worse predictors of scholastic success. It is unfortunate that scores can be raised appreciably by previous practice and coaching, though the National Foundation's report[2] indicates that the gain is much smaller and more irregular than parents and teachers believe; for example, six or nine hours of coaching produce no greater improvement than three hours. Both these and the attainment tests are often criticized because, being made up of short questions to be done at speed, they appear to emphasize "slickness" rather than more profound ability, application, or originality. But there is little psychological justification for this *a priori* analysis of mental abilities. It is much more true to say that intelligence tests do not, and have never pretended to, measure character and home background, and that attainment tests, though partly dependent on such qualities, hardly give them sufficient weight. It is also regrettably true that the objective tests have a seriously adverse influence on the primary school curriculum, since they stimulate teachers to coach merely for this type of examination and to neglect more useful forms of education. The older examinations, including the essay, were less harmful, and probably did reflect these elusive qualities more successfully. Assessments by primary school teachers, based on knowledge of their pupils and their work over several years, are better still. But there are great difficulties in using this type of evidence because of the subjectivity of marking or assessment—that is, its liability to bias and to great variations in standards between different teachers or assessors. The predictive values of these different procedures are all much about the same, the greater objectivity of the intelligence test compensating for the greater latitude of teachers' marks and estimates.

That the tests predict as well as, or better than, the more subjective methods has been proved in many researches where the marks of pupils at the age of 11 have been compared with their performance in grammar school two years later, or even with the School Certificate results five years later. At the same time, predictions are very far from perfect, and a considerable number of children do get into grammar schools who do not justify themselves, while many others are unjustly excluded. This is only to be expected when selection has to be made at so early an age, and when the interests and abilities

[1] *Studies in Selection Techniques for Admission to Grammar Schools.* University of Bristol Institute of Education, Publication No. 3. London: University of London Press, Ltd., 1952.
[2] *Secondary School Entrance Examinations.* National Foundation for Educational Research in England and Wales, Publication No. 6. London: Newnes Educational Publishing Co., Ltd., 1952.

of the adolescent in the new school environment, not to speak of home circumstances and health, are so apt to alter. Both Mr. James and Dr. Watts point out that a single set of tests is not sufficiently reliable, and emphasize the need for more thorough testing and for the development of techniques which will enable better use to be made of the more subjective types of assessment. It is to be hoped that education authorities will not only put these recommendations into practice but will also do more to allay the anxieties of parents about the fairness of the methods they use.

## DEATH FROM A DETERGENT

The older household disinfectants containing carbolic or cresols are well known as acute poisons and have often been self-administered for suicidal purposes. During the last 15 years new materials commonly referred to as detergents have been introduced both as disinfectants for medical and hospital use and as cleaning agents for domestic use. These synthetic detergents can be classified as anionic, cationic, or non-ionic according to their chemical structure. Of these the first group are the main ingredient of the new domestic washing powders and liquids, while the second category, because of their better antibacterial properties, are more popular as disinfectants. They are normally used in very high dilutions either for cleaning or for disinfection, and in this form are considered to be virtually non-poisonous and non-injurious to tissues. Dermatitis does develop in a few people sensitive to these compounds who use them for washing and have them applied to their skin for medical reasons. Recently some misgiving[1] has been expressed about the possible hazard arising from the continued consumption of small quantities of these materials with food. Such experimental evidence as exists has provided no evidence that they can exert any deleterious effect on experimental animals. Naturally these diluted preparations are normally prepared in the home or hospital from concentrated solutions containing 1–20% of the active ingredient. There is a general tradition that these concentrates present no hazard when handled in this way, and practical experience in Britain and other countries certainly bears this out. But a recent report serves to draw attention to the fact that such concentrates available as household preparations may in fact be extremely poisonous if accidentally ingested.

Adelson and Sunshine[2] record the case of a middle-aged woman who died about half an hour after taking a drink believed to be whisky and ginger ale but which was in fact whisky and a 10% solution of a cationic detergent (methyl dodecyl benzyl trimethyl ammonium bromide) sold for domestic cleaning purposes. Although she is supposed to have swallowed only a mouthful and was sick a few minutes later, she collapsed soon after walking across the road to a hospital. Here she was given apomorphine and vomited again. She soon became disorientated and developed Cheyne–Stokes breathing and became cyanosed, with dilated pupils. Cardiac action was described as good until death, which was preceded by general twitchings. Necropsy revealed no specific lesions and no corrosion of the gastric mucosa. Chemical tests on the stomach contents and the liver were both positive for quaternary ammonium compounds. The authors gave the same material to rats, and within five minutes of giving a dose equivalent to 370 mg. active ingredient per kilo body weight the animals had had violent convulsions and were dead.

It is not surprising that substances which will kill bacteria in such high dilution are themselves poisonous, for they are not specific "antibiotics" but exert a general toxic effect on living cells such as leucocytes. Their precise mode of action is not known. It is commonly held that they kill cells by interfering with the cell surface, but there is some evidence that they may have a more specific inhibitory action on certain enzyme systems, and changes in permeability may be secondary to this type of action.[3] It is quite clear that they exert their effects very rapidly when they enter the organism, and it is not possible with our existing knowledge to suggest any rational therapy to counteract their effect. The claim made by Adelson and Sunshine that they act by inhibiting cholinesterase cannot be accepted on the evidence presented. By their physico-chemical nature they are likely to be absorbed very rapidly from the stomach, but rapid emesis and gastric lavage would seem to be the only possible way of treating cases of accidental poisoning. Although anionic and cationic detergents counteract the effects of one another *in vitro*, it would not seem a safe course to advise the administration of one of them to treat poisoning by one of the other group, quite apart from the practical difficulty of knowing into what category a proprietary preparation actually fell. It might be well to consider the scheduling of concentrated liquids as poisons. Alternatively, the manufacturers might add something to give them a characteristic odour that would prevent their accidental administration.

1 Wilson, G. S., *J. roy. sanit. Inst.*, 1951, **71**, 652.
2 *Amer. J. clin. Path.*, 1952, **22**, 656.
3 Knox, W. E., *et al.*, *J. Bact.*, 1949, **58**, 443.

## THE TELL-TALE SCAR

Scars may tell an interesting tale and are not to be neglected by either the clinician or the criminologist. "Scarface" is a common character in fiction and film, and the records of Scotland Yard could provide the material of a fascinating work on the significance of scars. In some communities the scar, usually facial, has been a necessary mark of valour and distinction to the young man; in others it has been an elaborate form of adornment covering large areas of the body, being woven into intricate patterns and often worked into hypertrophic forms by the introduction of appropriate irritants into the skin.

The scar to the surgeon has always been a matter of concern,[1 2] and with the progress of plastic surgery has received increasing attention. A keloidal or thickened scar in particular sites, as in the region of

1 Greig, D. M., *Clinical Observations on the Surgical Pathology of Bone*, p. 16. Edinburgh, 1931.
2 Wood Jones, F., *The Principles of Anatomy as seen in the Hand*, p. 108. London, 1941.
3 Sequeira, J. H., *et al.*, *Diseases of the Skin*, 5th ed., p. 696. London, 1947.
4 Bras, G., *Arch. Path. (Chicago)*, 1952, **54**, 149.

a joint and particularly about the fingers, may cause considerable disability. The idea that tuberculosis may predispose to keloid formation has now been abandoned, though individual predisposition and variable susceptibility in the same patient at different times must be recognized. Certain particular irritant causes of keloidal scarring, such as burns and caustics, are recognized, as is the part played by lymph stasis. But in surgery perhaps the most important single concern is the direction of an incision in relation to Langer's lines of the skin, the lines of cleavage determined by the fibrous binding of the skin to deeper structures. Incisions should, if possible, be along the course of these lines and not across them, and Sequeira[3] reports the case of a right-angled scar one limb of which was normal and the other keloidal.

Recently Bras[4] has drawn attention to the severity of the pock-marking on the face in smallpox as compared with the scarring produced by the eruption at other sites. He has had the opportunity of performing 170 necropsies on the victims of smallpox in Indonesia and sought to elucidate the cause of these scar characters. He emphasizes that the degenerative reaction to the virus infection in the skin in this disease is limited to the epidermis and sebaceous glands, there being very little dermal reaction. On the face the sebaceous glands are large and numerous, and Bras suggests that it is the reaction to the disease of these sebaceous structures that determines the facial significance of smallpox scarring. The suggestion is an attractive one. Unfortunately Bras does not illustrate his thesis pictorially to show whether or not the scarring on the face follows the course of major seborrhoeic activity. There are other regions with considerable sebaceous gland development, such as the scalp and scrotum, which apparently do not suffer to a similar extent, but other factors may contribute to the degree of scarring, such as the mobility of the part. This is known to be important in keloid formation—the greater the mobility of the skin the greater the tendency to keloid. It is true that many forms of acne, and particularly acne varioliformis, tend to produce pock-mark scarring, and especially on the face, though it had been thought that the character of the infective toxin in these cases determined the nature of the reaction.

## LABORATORY DIAGNOSIS OF HERPES SIMPLEX

One of the most important considerations in the diagnosis of virus diseases is the ease or difficulty with which these infective agents can be handled in the laboratory. Herpes simplex virus presents no great difficulty in this direction: pathological changes in infected tissues are characteristic, several species of laboratory animals of convenient size and temperament are susceptible to infection, and antibody can be estimated by both *in vivo* and *in vitro* serological tests.[1] A number of improvements in diagnostic methods have been made in recent months. Direct examination of scrapings from skin lesions for characteristic multinucleate cells is a reliable and simple procedure[2] of use in the early stages of the infection. Kilbourne and Horsfall,[3] in attempting to isolate coxsackie virus in newborn mice, recovered instead herpes simplex virus: preliminary observations suggest that this may be a more sensitive medium for herpes than the fertile hen's egg and in some laboratories it may be found more convenient.

Immunity in herpes presents a unique problem. After primary infection and the appearance of antibody it is generally assumed that the virus remains latent in the body. Recurrent herpetic eruptions at the mucocutaneous junctions almost certainly result from virus reactivation. In so far as these recurrent lesions invariably remain localized immunity can be judged permanent and relatively effective. Burnet and his colleagues in Melbourne[4-5] showed that human sera had the unusual feature of containing herpes antibody in high titre or none at all: no gradation of antibody level as is commonly found in other infections could be detected by neutralization tests in the chick-embryo. Recent work from the United States has cast doubt on the validity of Burnet's interpretation of the "all or none" phenomenon of human sera. Kilbourne and Horsfall,[6] Jawetz and his colleagues,[7] and Rose[8] have demonstrated by various modifications of the neutralization test both varying levels and specific changes in herpes antibody. British workers have in the main confirmed Burnet's findings.[9-10] *In vivo* neutralization tests have obvious disadvantages, and the complement fixation test offers an alternative method of antibody estimation. Several such tests for herpes simplex have been described.[11-13] Recently Gajdusek, Robbins, and Robbins[14] have reported their findings with an antigen prepared from the extra-embryonic fluids of herpes-infected eggs. They confirm the work of Hayward[15] and Dudgeon[16] that this is a reliable test for determining the presence of antibody in primary and recurrent infections. Gajdusek and his colleagues, however, failed to detect changes in antibody level in the recurrent type of infection and were rightly cautious in attributing to herpes virus a variety of conditions such as erythema multiforme and recurrent stomatitis solely on the presence of antibody in the blood. The concept of herpes simplex virus as a cause of disease has undergone a marked change in recent years. From being regarded merely as the cause of the cold sore, with even its infectious nature in dispute, it has now come to be regarded as a typical infectious agent.[17]

We record with great regret the death on December 13 at his home in London of Dr. Charles H. Kellaway, F.R.S., director-in-chief of the Wellcome Research Institution since 1944.


1 Scott, T. F. McNair, *et al.*, 1948, *Diagnostic Procedures for Virus and Rickettsial Diseases*, New York, p. 243.
2 Blank, H., Burgoon, C. F., Baldridge, G. D., McCarthy, P. L., and Urbach, F., *J. Amer. med. Ass.*, 1951, **146**, 1410.
3 *J. Immunol.*, 1951, **67**, 321.
4 *J. Path. Bact.*, 1939, **49**, 241.
5 *Med. J. Aust.*, 1939, 637.
6 *Arch. int. Med.*, 1951, **88**, 495.
7 *J. Immunol.*, 1952, **68**, 655.
8 Ibid., 1952, **68**, 687.
9 Hayward, M. E., *Lancet*, 1950, **1**, 856.
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11 Bedson, S. P., and Bland, J. O. W., *Brit. J. exp. Path.*, 1929, **10**, 393.
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13 Afzelius-Alm, L., *Acta med. scand.*, 1951, *Suppl.* 263.
14 *J. Amer. med. Ass.*, 1952, **149**, 235.
15 *Brit. J. exp. Path.*, 1949, **30**, 520.
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17 Zuelzer, W. W., and Stulberg, C. S., *Amer. J. Dis. Child.*, 1952, **83**, 421.

## *REFRESHER COURSE FOR GENERAL PRACTITIONERS*

# THE BACKWARD CHILD—II. SCHOOL AGE AND ADOLESCENCE

BY

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### Reasons for Certification at a Later Age

The period after the age of 5, when the question of educability is decided, is critical for the ascertainment of mental defect. Adolescence is another critical period, when a group of children not previously certified are brought under the Mental Deficiency Act. Part of this group is made up of children who up to the age of 16 have been attending a school for the educationally subnormal. In any such school, if residential, there is a large number of pupils who are illegitimate or for other reasons have no home. It is common practice for such children on leaving school to be sent to a mental deficiency institution. To obviate the need for this and to give these children the opportunity of finding useful occupation a hostel system similar to that until recently provided in agriculture by the National Association for Mental Health has been advocated.

Difficulties may also arise with those children already ascertained as deficient and excluded from school but not admitted to an institution. A common difficulty is occasioned by the death or illness of the mother. A parent who accepts full responsibility for the care of a deficient child has an additional burden and is perhaps more liable to ill-health. This has been recognized, and patients may now be admitted to mental deficiency hospitals for a maximum period of two months without the usual legal formalities. This procedure, if it is not abused by those seeking permanent admission for their children, should tide over any difficult crisis. A recommendation from the family doctor, setting out the details of the case and explaining the necessity for temporary admission, should be the normal basis for acceptance.

### Legal Considerations

At all ages certification is the province of medical officers specially approved for the purpose by the local authority or by the Minister of Health. In this respect the procedure differs from that under the Lunacy Act. There is no obligation for the medical officers of the local authority to consult the family doctor, though it is clearly desirable that they should do so. The local authority medical officer acts in this matter rather by virtue of his experience as a school medical officer than on the basis of any special knowledge of psychiatry or psychology, though he will have had special training in the diagnosis of mental defect. A few local authorities arrange for psychiatrists to carry out this work. Usually two medical certificates are placed before a magistrate, who makes an order, although Section 3 of the Mental Deficiency Act provides for a procedure whereby admission of a patient under 21 to hospital is authorized on the basis of two medical certificates and a signed request from the parent or guardian, without a magistrate's order. This procedure, which is applicable only to idiots and imbeciles, is preferred by most parents as having something more of a voluntary nature. In an emergency a mental defective can be sent to an institution under the "Place of Safety" procedure (Section 15), pending arrangements for an order (Section 6) or for a Section 3 admission. Under this emergency arrangement, however, patients are sometimes sent to places which hardly justify the name of place of safety—for example, a mental observation ward. When writing certificates doctors should constantly bear in mind the age of the patient. It is not uncommon to read about a child of 3 that "he is unable to manage his affairs."

Once made, authority for detention under the Mental Deficiency Acts holds good until it is due for renewal after an interval of one, one, and then five years, or until it is discharged. There is no escape clause similar to that under the Lunacy Act. No matter how well a patient may have adjusted to life in the outside world, he is always liable to apprehension if discovered before the renewal of his order is due. An exception is usually now made in the case of female patients who marry, it being assumed that the husband is able to provide the "care, supervision, and control" which a defective committed to an institution is certified to need. The Ministry has recently circularized hospitals concerned pointing out that high-handed action in such cases may serve to bring the Mental Deficiency Act into disrepute.

The superintendent of an institution for mental defectives has the authority to send the patient on leave for up to 14 days. For longer periods the patient may be licensed to the parents or to an employer, usually for three or six months, the licence being renewable. In such cases medical care for the patient becomes the responsibility of the family doctor. Hospital management committees have authority to make some financial allowance to patients and to others undertaking the care of a mental defective on licence. The allowance is similar to that which would be provided by the National Assistance Board.

### Incidental Illnesses

Incidental illnesses in mental defectives do not present any greater problem than those occurring in children of the same mental age. Low-grade patients are less obviously distressed by pain than children of normal intelligence, so that they may be quite ill before the condition is noted. Refusal of food is often the chief symptom. Diseases, however, take a normal course in defectives and immunity is acquired in the ordinary way. Appendicitis and peptic ulcer are rarely associated with mental defect, though some cases may escape diagnosis. On the other hand, respiratory infections are unduly common, especially among mongols and gargoyles, whose expectation of life is reduced by the high incidence of bronchopneumonia. All young idiots and imbeciles are prone to inhale food particles when being fed, and, owing to weakness and inability to sit up, cannot respond with an adequate cough reflex. The position in mongolism may be further complicated by congenital abnormality of the heart, which occurs in 10% of all cases of this condition. It was formerly stated that mongols were peculiarly prone to tuberculosis, and that most of them died of this condition. This does not seem to be the case now, possibly owing to improved nutrition and reduced exposure to infection. The Mantoux reaction in mongols is converted to positive in the ordinary way after B.C.G. and vole bacilli inoculation, which seem to afford them the same degree of protection as the rest of the population.

Gross defectives are naturally incapable of following instructions about such matters as the taking of tablets. The feebleminded and higher-grade cases may, however, be little different from the general population in this respect, though illiteracy may complicate the issue. In

case of doubt it is advisable to repeat all instructions and entrust all drugs such as phenobarbitone to a responsible person other than the patient.

Epilepsy in mental defectives is more commonly associated with the severer forms of mental defects, as might be expected, since both are due to an abnormality of the brain. There is little to be gained in gross idiocy by the use of anticonvulsants. In high-grade patients, however, it is important if possible to keep the epilepsy under control, since this may be the deciding factor in questions of educability and employability. Due care should, however, be exercised not to *increase* the degree of mental dullness by excessive dosing with phenobarbitone or other anticonvulsant. In using hydantoinate attention should be paid to the gums. The risk of confusional states arising from protracted treatment with bromides is now well recognized.

### Employment

Certified mental defectives have limited civil rights and have some measure of special legal protection. Contracts into which they enter may be held invalid. They are not liable for military service. In fact, however, most high-grade defectives can be placed in gainful occupation. In general, there is undue caution in placing certified defectives, especially those in institutions, in outside work. It remains true that in times of considerable unemployment they are difficult to place. Also certain safeguards are necessary. Unless there is some supervision a defective may be employed for little or no wages for very long hours with no leisure time. Unless very much handicapped such a person should receive the full rate for the job. A suitable occupation and a sympathetic employer are also essential. The traditional occupation for boys and girls of limited intelligence are farm labouring and domestic service. To-day many factories can offer work which makes far less demand on the intellect than either of the above occupations. Many routine jobs of packing and assembling can be learned by high-grade imbeciles. A difficulty may arise in some cases because of the tempo of the work. Many defectives work more slowly than the average. It should be remembered, however, that many of those doing unskilled jobs, although not certified, have just as limited an intellect as those who have been labelled as defective. The latter may suffer, if they have been certified for long periods in an institution, from lack of experience of the world and lack of familiarity with money and day-to-day matters such as ration books and the various forms which are a part of modern life.

Neither epilepsy nor simple-mindedness need be a barrier to employment in many modern factories. Most modern machines are adequately protected so that they are literally "fool-proof." A defective who can be employed becomes at once much nearer to the normal. He gains in self-respect and feels himself like others. His character formation proceeds in a normal manner. It may seem at first sight that it is difficult to teach a job to defectives in view of the slowness with which they learn. If the job is such, however, that it can be broken down into a few simple components, and if it is taught patiently over a lengthy period, individuals of very low intelligence can master it. Effort spent in training in such cases is well worth while, since it may make the difference between an individual being a burden on the community for the whole of his life and being a useful member of society.

### Delinquency and Defect

The problem of juvenile delinquency has some connexion with mental deficiency, but it would be quite wrong to equate the two. It is true that an undue proportion of those charged with minor offences appear dull. On the other hand, very dull people seldom have the wit to get into trouble on their own initiative. They are usually led into mischief by others, who often exploit them for their own ends. Being slow to appreciate the danger of detection, they are also very liable to be caught. Although there is still a legal category of "moral defectives," this term is now little used: it is generally agreed that there is no special moral sense but that behaviour and character are modelled on those who surround the child from his early infancy. If the defective has a good environment he may well make a good citizen in spite of his limitations. Delinquent defectives are usually those with an unsatisfactory home and social background. The defect in the background is not always at once apparent. High-grade defectives are often very sensitive about their lack of success and may react with antisocial behaviour if they are not treated with due tact and consideration. However, it frequently happens that a defective is labelled delinquent because of the commission of some minor offence, often many years previously. It is seldom that people who are genuinely of really limited intellect commit serious crimes. There is much confusion of thought on this subject, largely because of failure to distinguish between insanity and mental deficiency.

### Reproduction

Some supervision and protection of mental defectives is necessary, even after the age of 16, particularly in the case of girls. This protective attitude may be carried to excess and may interfere with the development of the character and independence of the protected individual, who has, through lack of worldly experience, become prone to be taken advantage of. Stress is often laid on the possibility that female defectives will produce large numbers of babies. In fact the number of babies born to mental defectives is small. The most fertile group in the community has a higher intelligence level than that which is usually associated with mental defect. Undue anxiety about this matter need not be felt on eugenic grounds, since most forms of mental defect are not due simply to hereditary factors and most defectives are born to normal parents.

A more serious objection to defectives having babies is that they may not be good mothers. Some supervision in this connexion is therefore desirable. If this is carried to excess, on the other hand, it may defeat its own object, since, if all open friendship with the opposite sex is forbidden, illicit relationships with undesirable results may be formed. A sense of proportion should be maintained in viewing the behaviour of defectives. It should be remembered that a high proportion of illegitimate births occur among the general population, and that if a feebleminded girl becomes pregnant it does not follow that permanent detention in an institution is the necessary step. She may be capable of "learning her lesson" like other girls. She is more likely to do this if given the responsibility of caring for her baby, if she is at all fit to do so. Legally it is an offence knowingly to have sexual relations with a certified mental defective, irrespective of age and consent. Few charges are brought under this head because of the difficulty in proving that the man knew the girl was defective.

It is sometimes implied that the majority of prostitutes are mentally defective. This is far from being the case. A true defective seldom embarks on a life of prostitution on her own account, though in this respect also she may be exploited by others. It should not be assumed that defectives are abnormally interested in sexual matters; if anything, the reverse is the case. Certainly in low-grade cases there is often little sexual development. Mongols are often almost asexual and apparently have no capacity for reproduction in the majority of cases. When male defectives are guilty of sexual offences these usually take the form of exposure and masturbation in public.

There are many advocates of sterilization for mental defectives, and this practice is legal in some American States and elsewhere. A study of results observed is not impressive. It is also difficult to reconcile compulsory sterilization with prevailing ethical concepts in British medicine. As has been suggested, sensible supervision and advice are enough in most cases to guard against the birth of babies to certified defectives, who in any event form only a fraction of the intellectually dull.

### Advice to Parents on Further Children

Apart from advice about the patient, parents of a defective child will often seek advice on their own behalf. They are usually very interested in the aetiology of the defect and its possible transmission. With younger parents, or those with only one child, the problem of whether to "risk another one" arises. In most cases parents are well advised to take this risk, though the facts, so far as possible, should be presented to them and the decision left with them. The immediate reaction to the birth of an abnormal child is often to decide against a further one. If the affected child is the only one parents are liable to become morbidly interested in it to the detriment of both themselves and the child. The odds are heavily against the birth of more than one defective in a sibship unless it is one of the uncommon conditions definitely known to be hereditary—phenylketonuria, epiloia, etc. Most of these conditions are readily recognized. The characteristic butterfly-shaped rash at the sides of the nose betrays epiloia; the green colour in the urine on addition of a few drops of liquor ferri perchloridi characterizes phenylketonuria; the hairy features and distended belly are characteristic of gargoylism. A careful family history is of course essential, though evidence of unrelated neuropathies—for example, senile dementia, schizophrenia, cerebral arteriosclerosis—is not relevant, especially in distant members of the family. Before arriving at a decision in such a matter it is desirable to have the child examined by a paediatrician or expert in mental deficiency.

Occasionally it happens that there is more than one defective in a family, sometimes without it being possible to ascribe the condition to any particular syndrome. In these cases further children are inadvisable. Ordinary methods of birth control are usually adequate, but sterilization may be indicated. Rhesus blood group incompatibility raises a special problem. If one child has been so severely damaged as to be mentally defective the prognosis for a further affected child is poor. However, if the father is heterozygous there is an even chance that a subsequent baby will not be affected.

Parents may also seek advice about the possibility of the transmission of the defect through their normal children to their grandchildren. They can usually be reassured on this score, with emphasis on the environmental factor, but in conditions such as phenylketonuria and gargoylism the possibility cannot be overlooked.

### Conclusion

Mental deficiency is still very much a blank space on the medical map. Much more information is needed about the natural history of children with limited ability. This information is not readily got from institutions where children grow up under abnormal conditions which may themselves cause what are thought to be the typical features of mental defect. The general practitioner can do much to fill this gap in our knowledge.

In general, mental defect should not be seen as something fixed, rigid, or conforming to set patterns. In this as in all other branches of medicine individuals must be studied as such. No matter how gross the defect each has his own individual peculiarities and traits. In spite of the absence of specific therapy for this group of conditions the outlook is by no means uniformly gloomy. The family doctor can by a sympathetic and understanding approach help to solve many of the problems arising from those of his patients with less ability than their fellows.

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# A SCHEME FOR THE ORGANIZATION OF A MILK-ROOM IN A GENERAL HOSPITAL

BY

**JOHN L. EMERY, M.D., D.C.H.**

*(From the Department of Pathology, Children's Hospital, Sheffield)*

With the rapid development of the country's paediatric service the traditional feeding of infants according to the fancy of the ward sister is being replaced by the prescribed feeding of the paediatrician. The latter has usually been trained in hospitals having expensive milk-formula rooms. The provision of such rooms in all hospitals and maternity homes is economically impracticable, and advice on the subject is asked by paediatricians with beds in many and diverse hospitals.

The advantage of the milk-room lies chiefly in the production of accurate, varied, and clean milk formulae. The disadvantage lies in the danger of rapid and widespread dispersal of infection among the babies of the hospital. Unless a system is almost foolproof the possible disadvantage outweighs the advantages of a central milk service.

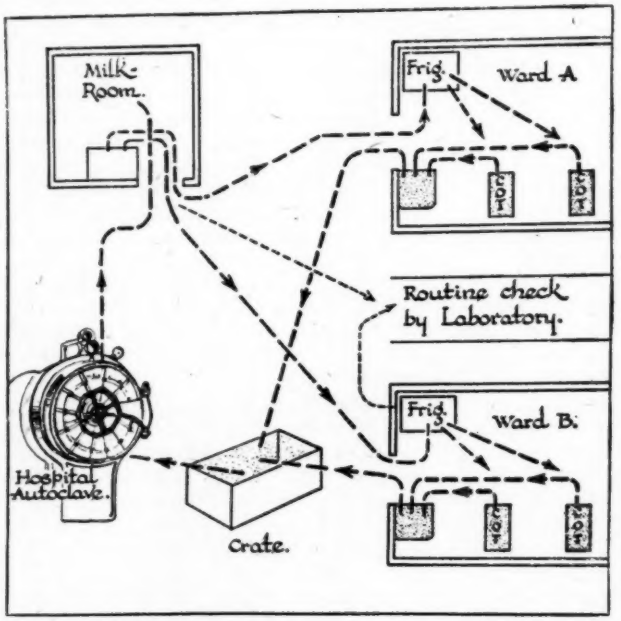


FIG. 1.—Showing the general plan of a milk service. Note in particular that the materials from the ward do not go direct to the milk-room.

The system described below was introduced into a Sheffield hospital three years ago, when a milk-formula room was developed and when no extra equipment was available. The system (Fig. 1) has worked extremely well; regular bacterial checks have been satisfactory, and the milk service has entailed virtually no capital outlay on the part of the hospital. The essential points of the system are: (1) a sterilization barrier between the wards and the milk-room; (2) after preparation the feeds are capped and sterilized by steaming; and (3) the nurse feeding the baby does not handle the teat of the feed-bottle.

### Summary of Method

*(a)* The ward nurses are required to swill out the milk-bottles and teats in running tap-water immediately after they have been used. The ward staff place all used bottles, teats, etc., in a central receptacle—a crate which is quite separate from the milk-kitchen and which the milk-nurse is forbidden to touch or handle. This is taken by a porter to the hospital general autoclave. It is treated by steam at 5 lb. (0.35 kg. per cm.²) for 20 minutes, removed wet, and then taken to the milk-kitchen. (N.B.—The milk-nurse touches and handles nothing direct from any of the wards.)

*(b)* The bottles are cleaned by the milk-nurse—using chemical detergents—for example, solution of sulphestol ("teepol")—and then swilled in ordinary hot tap-water and allowed to drain. They are then filled with milk feeds.

*(c)* After filling, the teats are put on the bottles and a folded paper cap is fixed over each bottle and secured by a rubber band. The child's name and ward have previously been written on the paper cap (Fig. 2). Each cap is made from a quarter of a sheet of machine-glazed sulphite paper (£1 13s. 6d. a ream—480 sheets).

*(d)* The filled and capped bottles are then placed either in crates or free in an ordinary bowl sterilizer. The only addition to the sterilizer is a shielded thermometer (price 25s.) fixed permanently through a hole bored in the lid of the sterilizer. The water is left below the level of the bottles (Fig. 3). The bottles are left in the sterilizer for 30 minutes after the temperature of the thermometer registers 210–212° F. (98.9–100° C.). If no thermometer is available the bottles are left in the instrument for 45 minutes after boiling has begun. This method of terminal heating does not alter the appearance of the feed or produce partial caramelization with browning as when an autoclave is used.

*(e)* After sterilizing, the milk-nurse takes the feeds and places them in the child's ward refrigerators, from which they are used. When the bottles are in the crates the bottles are not touched by the nurse. This dispersal to the wards is necessary to cool a large bulk rapidly (an average of six feeds per child), as a normal large refrigerator cannot be used for cooling large volumes of fluid. It is rare that any single ward has more than two bottle-fed babies at one time, and the ordinary ward refrigerator seems to be capable of dealing with these. (A fully equipped milk-kitchen requires a specially built cooling refrigerator.)

*(f)* Before being given to a child, a feed is warmed by standing for 10 minutes in a pan of water that has previously been boiled in the pan and allowed to cool partly. The water should not cover the paper cap.

*(g)* For formulae that are altered by heat treatment—that is, lactic acid milk or cereals—the bottles and teats are first sterilized, then filled with the fresh feeds by the milk-nurse, and taken immediately to the refrigerator.

*(h)* The laboratory makes a monthly bacteriological check of random feeds for sterility.

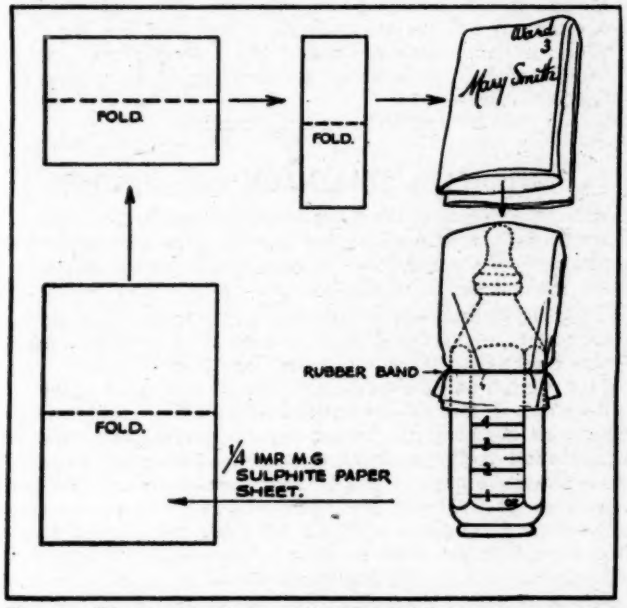


FIG. 2.—Diagram to show method of folding paper to make formula caps; the name is written in pencil on the cap before it is fixed over the bottle.

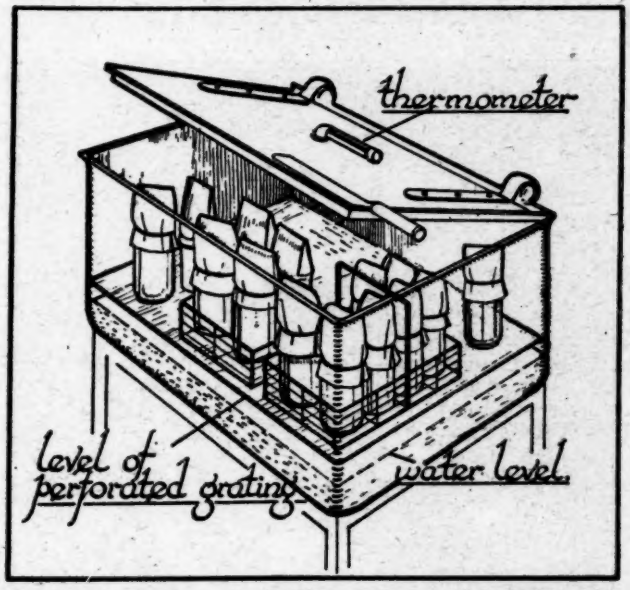


FIG. 3.—A diagrammatic drawing of the modified sterilizer for terminal heat of the feeds. Note that the water surface is below the level of the perforated shelf, and that the thermometer is fixed through the lid.

*(i)* The milk-room nurse has other obvious duties, such as the collection of breast-milk from maternity units and maintaining it clean for the use of ill babies. The milk-nurse should preferably not handle babies or children during her other daily duties, and if she has ward duties she should do her milk-room duty first.

It is essential that all nurses in training have experience in making milk formulae.

The speed and efficiency of the milk-room are increased by the use of an electrical rotating brush for cleaning the bottles and a "mechanical domestic whisk" for mixing the powder-milk formulae.

This system is based on recorded American systems. The paper cone caps were designed as a substitute for the "formula bottle caps" used by the American Sterilizer Company. The paper caps prevent the teats of the bottles being seen by the nurse before feeding the child, but in practice the milk-nurse is usually told of the baby's need, and sterile spare teats are always made available.

Narrow avenues of cross-infection in the wards by such means as refrigerator-door handles are not catered for, but the system does appear to be efficient, involves little financial outlay, and is applicable to any hospital.

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The Minister of Food, after consultation with the Secretary of State for Scotland, has announced that plans are under way to extend the areas in Scotland in which only specially designated milk may be sold, and an Order will shortly be laid before Parliament. Since last April only specially designated milk may be sold in Glasgow, Edinburgh, Aberdeen, Dundee, and many towns in Lanarkshire and Renfrewshire. When the new Order comes into force over 60% of the population of Scotland will live in areas which are assured of a safe milk supply. (*Scotsman*, November 21.)

## VICTOR BONNEY AT 80

It seems only yesterday that one saw Mr. Victor Bonney actively and eagerly engaged as always in his work at the Middlesex. Perhaps, indeed, it was only yesterday, for nearly every week Victor Bonney leaves the home of his retirement on the banks of the Wye—much to the relief of the salmon and trout in the fishing season—and comes to London to rejoin his old colleagues. He qualified 56 years ago, having taken his training first at St. Bartholomew's and then at the Middlesex, and he was not more than 27 when he became Fellow of the Royal College of

[*Lafayette, London.*

Surgeons and M.D. and M.S. of the University of London. Since then he has made innumerable contributions to gynaecology, its practice and its literature, has devised a number of ingenious instruments, has taught generations of Middlesex men and others, has served as consultant at the Chelsea Hospital for Women and as visiting gynaecologist to the British Postgraduate Medical School, has done noteworthy service for the Royal College of Surgeons, rising to be vice-president, has been a member of council of the Central Midwives Board, and has held many other important appointments.

In three directions in particular Victor Bonney has made outstanding contributions to British gynaecology. The first of these was, in collaboration with the late Sir Comyns Berkeley, in extending and perfecting Wertheim's operation for cancer of the cervix uteri; the second, his pioneer work in the operation of myomectomy; and the third, the devising of his technical modification of the Reverdin needle. Of his many writings perhaps the most important is his work, again in collaboration with Sir Comyns Berkeley, on operative gynaecology (*Textbook of Gynaecological Surgery*), a further edition of which he is at present preparing.

Mr. Victor Bonney was born on December 17, 1872, in Chelsea, where his father was a well-known physician and surgeon. Perhaps his early artistic environment accounts for his skill in painting, which has always been one of his main relaxations. He is one of the relatively few medical authors who have been able to illustrate their own books. His fame as a gynaecologist stretches far beyond this country. During his visit to Australia he was made honorary fellow of the Royal Australasian College of Surgeons, and the American Gynaecological Society paid him a similar honour.

His entrance into the distinguished company of medical octogenarians is a matter of warm congratulation among his troops of friends, who include many who have been at one time or another his students. They wish him yet more years of happy and active life, but, however many those years may be, his influence and teaching will continue far beyond them.

## THE MAIN DRAINAGE OF LONDON

A large audience at the Royal Sanitary Institute on November 25 assembled for a lecture by Mr. J. RAWLINSON, Chief Engineer of the London County Council, on the history of the main drainage of London.

Mr. Rawlinson said that it had been recognized from the earliest times that drainage, by natural or artificial means, was essential to the comfort and health of mankind. Surplus rainfall and the waste products of populations must be disposed of, and as populations increased it became necessary to augment or replace natural drainage systems by large and costly engineering works. There had been an elaborate drainage system at the palace of Minos, in Crete, as early as 2000 B.C., and there were records of sewers at Nineveh 3,000 years ago. In the sixth century B.C. Rome possessed an extensive network of sewers, and the duty of keeping them in good repair was delegated to a special board. Citizens who wished to connect their dwellings with the mains system were required to pay a special tax.

During the Middle Ages sanitary standards deteriorated, and while magnificent cathedrals were being built efficient drainage was unknown. The first mention of a drain—probably an open ditch—in the middle of Paris was in 1412, and the first efficient drain in that city dated from the middle of the seventeenth century.

### From Ditch to Modern Pumping Station

In London the earliest sewers were natural watercourses, the Kilbourn, Westbourn, Fleet, and Shoreditch on the north of the Thames, and the Effra and Ravensbourn on the south, among others. In the reign of Richard II the first Act of Parliament was passed dealing with the purity of the Thames and other rivers. In 1462 the Walbrook was described as a public nuisance and covered over with brick and stone, but the Fleet continued to enjoy the light of day. In the reign of Henry VIII the Bill of Sewers was passed, remaining in force for about 400 years, and under it Commissioners of Sewers were appointed with power to levy rates and carry out useful works. In London large brick sewers were built under the streets.

A survey of the metropolis early in the nineteenth century showed that many houses were without drains, and most of those that were drained had overflowing cesspools beneath them. With the constant growth of piped water supplies the commissioners began to give permission for water-closets to be connected to the sewers, and in 1847 made this compulsory. However, the outfall of the streams and sewers was below the level of high tide in the Thames, and there was therefore no free outlet for the discharge: the result was extensive flooding of basements at high water. All this time the population of London was increasing, reaching nearly a million by the middle of that century. It was strongly suspected that defective drainage contributed to the alarming outbreaks of cholera in 1838, 1841, and 1853. Six Commissioners of Sewers were appointed between 1848 and 1858, and their recommendations

played an important part in the decision to form the Metropolitan Board of Works in 1855. Sir Joseph Bazalgette was appointed chief engineer of the Board, and carried through a drainage system, completed in 1874, an important part of which was the provision of intercepting sewers running parallel to the river. The flow was concentrated at two eastern outfalls on the north and south side of the Thames where huge reservoirs were constructed in which the sewage was stored during flood tide and discharged into the estuary at the ebb. Bazalgette's task would have been much simpler if the sewage could have been made to flow by gravitation, but at certain points it had to be lifted.

Mr. Rawlinson dealt at length with the disposal of surface and store water. Chadwick had been strongly in favour of giving each house a separate drain for sewage and another for water, but this would have involved redraining nearly every house in London and pulling up nearly every street. Equally it was impossible to construct intercepting sewers which could deal with the whole of the surplus water of an abnormal rainfall. It was necessary to install storm-water pumping stations ready to deal instantly with any emergency. Precipitation works for the purification of the sewage at both outfalls were also started by the Board of Works, but before this task had been completed the Board's functions were taken over by the London County Council.

### Three Thousand Miles of Drains

Beneath the streets of the County of London, said Mr. Rawlinson, were about 2,750 miles of local sewers maintained by the borough councils and the Corporation of the City, and over 400 miles of much larger mains and intercepting sewers which were the concern of the County Council. In most of the sewers it was possible to walk upright; the old Fleet sewer was about 12 ft. high, but others were much smaller and maintenance work was carried out under more difficult conditions. Poisonous gases and explosive vapours were occasionally found in the sewers, and there was the ever-present possibility of a sudden rise in the water due to storm some distance away.

How much did this service cost the ratepayers? The gross annual cost of maintenance was £935,000, equal to just over 4s. a head. Could the river ever be brought back to its original state of cleanliness, and, if so, was it worth while? From the engineering, chemical, and medical information which had been accumulated it was accepted that the river must receive a certain dilution load if a crushing financial burden for new construction and maintenance was to be avoided. A careful watch had to be kept on the water, and the danger mark was reached when dissolved oxygen in the river reached a certain low level.

In conclusion Mr. Rawlinson discussed two special difficulties which beset the engineer to-day: one the gradual subsidence of the land in South-east England, and the other the surges of the North Sea, which occasionally caused exceptionally high tides in the Thames.

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The Duke of Edinburgh, during his speech at the annual meeting of the Automobile Association on July 16, referred to the efforts being made by various organizations towards the prevention of road accidents. He felt that these organizations were tending to work in watertight compartments and suggested that this problem should be tackled as a joint operation. In response to this suggestion, representatives of 38 organizations already working for road safety met in conference on October 15 and agreed to co-operate in formulating a new programme to bring about a further reduction in road accidents. The conference was initiated by the Royal Society for the Prevention of Accidents, and those participating included representatives of all types of road-users, teachers, police, and the local authorities.

# Correspondence

*Because of the present high cost of producing the Journal, and the great pressure on our space, correspondents are asked to keep their letters short.*

### Lipodystrophy and Lipo-atrophy

SIR,—May I make a few remarks on the most interesting and erudite article by Dr. Ian Murray (December 6, p. 1236) on lipodystrophy, wherein he includes a case of mine which I have called lipo-atrophy? I would like to stress the difference in these two terms and conditions.

Let us admit that the cause of the failure to deposit subcutaneous fat, in part or in the whole of the body, remains a fascinating obscurity. The word "lipodystrophy" usually implies no fat above the umbilical region and an excess below. But is this contrasting excess more than the buttocks and legs often display in fat women? I think it is, and, if so, a simple explanation can be put forward. With normal eating and a flow of metabolites circulating for fat storage, if they cannot be laid down up top they go in excess to the bottom receptive areas. Mainly this leads to no gross upset of carbohydrate/fat total balance nor to "diabetes." But the case of lipo-*atrophy* with diabetes which I described (1946) had no fat deposits anywhere and presents a different metabolic problem. I am glad to say that two more cases of complete lipo-atrophy have been found (not yet fully published) identical to mine. Thus this very rare syndrome, lipo-atrophic diabetes, is clearly established.

Unfortunately there is no factual knowledge of the internal fat depots (round the kidneys and elsewhere) in these patients, and I do hope this comes to light sooner or later, for it is an important gap remaining to be filled.—I am, etc.,

London, W.1. R. D. LAWRENCE.

### Self-demand Feeding

SIR,—I should like to make some comments about the paper by Drs. J. D. Hay, P. D. Moss, and M. M. P. Ryan (November 29, p. 1180) on self-demand feeding. The paper gives the impression that mothers have to be *persuaded* to feed their babies when they are hungry, and that "constant and detailed supervision" is required to see that they do so. They say, for example, that "where supervision is not adequate self-demand is likely to degenerate into regular feeding, with a little drop in between if he cries." In my experience there is not the slightest difficulty in getting a mother to understand that it is the common-sense and natural thing to feed her baby when he is hungry, rather than to wait until the alarm clock says that he ought to feel hungry. I should have thought that much more supervision would be necessary to ensure that a woman possessed of any intelligence at all would keep her baby crying prolongedly from hunger because the alarm clock has not announced that it is now time for the baby to have his hunger assuaged. It is true that one occasionally comes across a woman with a particularly orderly mind who cannot tolerate the idea of some irregularity of the feeding times. Unless the baby is suffering severely from a rigid schedule, I think that such mothers should be left to feed their babies "by the clock," for they will be much happier so doing. Quite a lot of undesirable tension, which adversely affects both mother and baby, can be generated by undue insistence on a strict self-demand schedule.

Supervision is, of course, required for babies fed on demand, as it is on any schedule, and mistakes will be made whatever method is used. It is essential for instance, to explain to every mother that babies should be fed not whenever they cry but when they are hungry It is a common mistake to interpret every cry as a sign of hunger, and I have seen many mothers feeding their babies far more often than is necessary on that account. Mothers should be told that in the first few weeks the chief causes of crying other than hunger are discomfort (chiefly gastric flatulence and the so-called "three months' colic") and the

desire to be picked up and cuddled, and to see what is going on. The differentiation of hunger from colic is difficult, and space will not permit of a discussion of this matter here. The difficulty is that in both cases the baby does not stop crying, except momentarily, when picked up. The baby, however, who is merely crying for company stops crying when taken into his mother's arms. Failure to discuss these matters with the mother will lead to difficulties in self-demand feeding and tend to bring the method into disrepute.

The authors say, "It is noteworthy that Illingworth *et al.* found the services of two registrars to be necessary at the Jessop Hospital for Women at Sheffield." This is not true. For the particular experiment which we were carrying out, a senior registrar from the children's hospital was made responsible for the collection of data, and for nothing else. The resident registrar is responsible for the normal day-to-day supervision of the babies and their feeding. Two registrars were not, therefore, required for the supervision of self-demand feeding. As explained in our paper, self-demand feeding had been used in the hospital long before the particular controlled experiment which we described.

I do not understand the statement that ". . . it is, of course, especially necessary that all concerned should appreciate that with self-demand feeding there will be fluctuations in the rate of weight gain owing to the variable times of feeding and the varying quantity of milk taken at each feed." Most normal babies vary in the quantity which they take at various feeds, on whatever schedule they are fed. There are no greater variations on a self-demand schedule than on a rigid one, and there are no reasons why there should be.

They say that "Illingworth *et al.* . . . make no reference to the possible difficulties of such a regime and how they were overcome." That is true. Our paper did nothing more than present the results of a carefully controlled investigation to determine the effect of the feeding schedule on the establishment of lactation. A reasonable discussion of the advantages and disadvantages of self-demand feeding would require a full-length paper on its own, and we deliberately confined our paper to the report of the facts of the experiment, only making such comments as were strictly germane to those facts.

In some ways the term "self-demand schedule" is an unfortunate one. I would prefer to call it the "common-sense feeding schedule," implying that the feeding method should be based on common sense rather than on any preconceived idea. I am sure that it is wrong to give a mother the impression that she should drop everything the very moment the baby cries for food. She should, however, be told that it is wrong and senseless to leave a baby crying a long time for food—in the night, for instance—in the first few weeks, because of some ill-founded belief that by feeding the baby in the night bad habits will be produced. In the same way I think that it is wrong to tell the mother that she should never waken the baby for a feed. If there are particular reasons for wanting to feed the baby at a given time, such as the parents' bedtime, then there is nothing wrong about wakening the baby for the feed, if one can. That is very different from regular and unnecessary efforts to waken the baby at fixed times. I can see no justification for a rigid self-demand schedule. The schedule should be based on common sense. One might add that the self-demand schedule cannot be used in the case of the drowsy baby in the newborn period who shows "inertia," nor in the case of the premature or ill baby.—I am, etc.,

Sheffield. R. S. ILLINGWORTH.

REFERENCE

Illingworth, R. S., Stone, D. G. H., Jowett, G. H., and Scott, J. F. (1952). *Lancet*, 1, 683.

## Period of Gestation

SIR,—The suggestion is made in a letter from Dr. K. Joyce Mulvany and Mr. Bernard Goldstone (November 15, p. 1102) that the length of gestation may be related to length of menstrual cycles on the maternal side and the cycles of females on the paternal side. In the eighth edition of Whitridge Williams's *Obstetrics* (New York, 1941, p. 258) it is stated that Riebold had suggested that the duration of gestation was related to the menstrual cycle. But Loewenhardt had already in 1872 suggested that the length of gestation was ten times the menstrual cycle. Schatz had also put forward this view. The discussion of the matter in this textbook concludes that in the long run such considerations give no more accurate results than the usual reckoning of Naegele that pregnancy lasts 280 days, or approximately nine months plus seven days from the onset of the last period.

The letter of Dr. Mulvany and Mr. Goldstone has, however, an interesting new feature in suggesting the possibility that paternal factors are also involved. If further investigated this might throw some light on the causes of labour. It would indeed be of interest if a latent influence is transmitted through the father. Do we in fact know much about how the length of the menstrual cycle is determined in the individual? Investigations on this might give valuable information on endocrine mechanisms. In birds I understand that seasonal variations in light have been related to ovulation. Human and avian physiology differ very much, and it seems obvious enough that light is not a governing factor in human ovulation, but, although we know much of the actual cycle in menstruation, we do not know why its duration is variable although it tends to be constant in the same individual—I am, etc.,

Accrington. R. C. WEBSTER.

## Mind and the Skin

SIR,—I have a personal knowledge of Dr. A. A. Mason's case of congenital ichthyosiform erythrodermia of Brocq (August 23, p. 422), as this boy was under my care for a period of about nine months prior to the plastic operations referred to in the text. I saw this boy again later on two occasions, once at King's College Hospital and again at a meeting of the Dermatological Section of the Royal Society of Medicine. Although highly impressed by Dr. Mason's undoubted ability as a hypnotist, I was not so impressed by the clinical improvement in the patient's skin condition. However, as several months had elapsed since I saw the child, I reserved judgment. If hypnosis was responsible for the reported improvement it only needed a further period of treatment to bring about complete clearance of the lesions. It is obvious, therefore, that the value of hypnosis in cases of this nature stands or falls on the subsequent history of this boy, so perhaps Dr. Mason will inform us on this point. Failure to record further improvement must of necessity cause a critical observer to discard hypnosis as the agent responsible for any previous change observed, whilst success would indeed be a milestone in the advance of dermatological treatment.

I would comment on the article "Psychiatric Survey of a Random Sample of Skin Out-Patients," by Drs. S. P. Hall-Smith and A. Norton (August 23, p. 417), under three headings. First, are these findings statistically significant? As my knowledge of statistics is meagre I leave this aspect to others more qualified to pronounce judgment, but if the figures are statistically significant would one be justified also in concluding, since 2 out of 100 cases were Plymouth Brethren, that members of this religious body are significantly more prone to skin disorders than members of other religious beliefs.

Secondly, we are informed that 100% (that is, 8) of cases of sycosis barbae showed "grave psychiatric disorders." Can it be accepted that this infective process is originated by psychological abnormalities, and, if so, why not change the name to "psychosis barbae"? Surely, even if psychiatric abnormalities were present in these cases they can only be as significant in this disorder as would the presence of blue or brown eyes in the victims. Neurodermatitis (19 cases again showed 100% psychiatric disorder) is given as a firm diagnosis. Is this so? Let me quote Sulzberger and Baer[1]: "Many dermatologists persist in using the outworn term 'neurodermatitis' . . . it is for this reason we subscribe to a return to the original modern descriptive term of 'lichen simplex,' which cannot be misleading as to pathogenesis and does not pretend to a knowledge of causal mechanism which medical science is as yet far from possessing." Many further points could be taken, but I would like to quote the answer to the question posed by Hall-Smith and Norton. "Can psychic factors provoke skin disorders?" They proceed thus: "There can be little doubt of the answer. Again and again these patients, of their

own accord, said they were aware of the close significance of emotional factors in provoking and prolonging their skin complaints." Imagine the utter chaos that would result if we begin to accept our patients' interpretation of the aetiology of their complaints.

Thirdly, even if not trained as a psychiatrist one must after nearly 30 years in the practice of medicine gain a fairly deep knowledge of our fellow men, so that, when one is informed that nearly 80% of patients attending our dermatological out-patients are psychologically abnormal, one cannot help wondering what criteria our psychiatric colleagues use to judge the abnormality or otherwise of their patients. "It's me nerves, doctor" may justify our patients' urge to find an explanation of their disorders, and, as it is also useful in cloaking our ignorance when confronted with the many vagaries of the skin, there is a natural inclination to accept this easy way out. But to do so will surely perpetuate our ignorance and stultify the only truly scientific method of study—the objective approach.—I am, etc.,

London, W.1. F. L. LYDON.

REFERENCE

1 *Year Book of Dermatology and Syphilology*, p. 37, 1951, Chicago.

## Psychology and Psychiatry

SIR,—I have been following with interest the correspondence on psychology and psychiatry in recent numbers of the *Journal*, on which the letter from Dr. G. A. Powell-Tuck and Mr. N. J. Renshaw under the heading "Faith and Functional Illness" (November 8, p. 1045) has also a bearing.

There is a need for the recognition of psychotherapy as an art evolved from both scientific training and from having "lived" (as Dr. W. W. Mackinlay (p. 1047) expresses it) and acquaintance with different ways and levels of living. Understanding, sympathy, and real interest are essential to successful psychotherapy, and of these every family doctor can give, as can also priests, nurses, and social workers, whose attitude to their work is vocational. They also have wide experience of modes of living, and the demands made on them are such as to challenge them to "live" themselves. But they must necessarily lack the psychiatrist's special knowledge and experience of mental illness, its diagnosis and prognosis. For this they refer to the psychiatrist. The psychiatrist, on the other hand, is not always qualified—in spite of his scientific equipment—to practise psychotherapy. He is primarily a consultant, not a practitioner.

The psychotherapist is, however, a practitioner by choice. His intense interest in people which underlies his psychiatric knowledge and experience enables him to relate the sufferings of patients whose troubles have been labelled "neurotic," or at least "psychogenic," to his deep knowledge of the processes and mechanisms of emotional development. This knowledge, if gained from personal analysis and from psychiatric work with children, has become an integral part of his mind. His understanding, therefore, goes deeper than an appreciation of his patients' immediate stresses, and it is this deeper understanding which enables him to give psychotherapy that goes further than sympathy, reassurance, encouragement, and advice.

This, surely, is the "half-way house" recommended by Dr. R. Macdonald Ladell (p. 1046). The need is met of many potentially valuable people, for whom the G.P. literally has no time, but whose illness is as crippling and expensive in its destruction of the power to work as is "organic" illness. I suggest that hospital psychiatric out-patient departments should employ, in addition to consultant psychiatrists, practising psychotherapists of consultant status (for they must be able to select their own patients for treatment) whose recognition of themselves primarily as practitioners will limit the time given by them to purely diagnostic interviews. Local G.P.s would soon learn the type of patient suitable for reference to them.

The psychotherapist's work is recognized as essential in residential neurosis centres, but these are scarce, and many of the most suitable patients for real psychotherapy neither need nor are able to accept residential treatment. They are nevertheless in dire need of more or less intensive psychotherapy, whose aim is, again as suggested by Dr. Ladell, primarily the adjustment of a warped personality, rather than the cure of the symptoms initially complained of by the patient.—I am, etc.,

Peppard, Oxon. LAURA HUTTON.

## Subconvulsive Electrical Stimulation

SIR,—In their paper on subconvulsive electrical stimulation (November 29, p. 1170), Drs. A. Spencer Paterson and Arthur Conachy quote me as having described an electroencephalographic change which appears "just at the stage in E.C.T. treatment when the patient is conscious of subjective improvement." Since the relevant passage in their paper might convey the erroneous impression that it was to the improvement in the mental disorder that the change in the E.E.G was attributed, I should like briefly to comment on it. In the paper in question (Roth, 1951) it was stated that "E.E.G. changes tend to correspond with *or precede* the earliest signs of recovery." It was also shown that in over a quarter of the cases typical changes were associated with little or no significant improvement. Other data suggested that the severity of the changes in the E.E.G. of a given patient was dependent upon the number and frequency of the treatments administered. The clinical effects would appear to be related to changes in the E.E.G. only in that at some stage in the development of these changes, which varies considerably in individual patients, subjective or objective clinical improvement may appear. It was, however, suggestive that the signs of recovery were never observed in the series of patients I reported unless some alteration in the E.E.G. was already in evidence; but the relationship between the development of clinical and E.E.G. changes is at present being submitted to a more detailed investigation.

Since it is the E.C.T. and not the clinical changes as such that causes the alterations in the electrical activity of the brain, it follows that where clinical improvement is achieved by other means, as in the patients treated by Drs. Paterson and Conachy, E.E.G. changes of the kind I have described would not necessarily be expected to occur. Their claim to have observed such changes in one of their five patients is none the less interesting, as it suggests that they may occasionally be induced without convulsions.—I am, etc.,

Chichester. MARTIN ROTH.

REFERENCE

Roth, M. (1951). *Electroenceph. clin. Neurophysiol.*, 3, 261

## Cortisone in Sjögren's Disease

SIR,—Dr. L. B. Bourne (August 23, p. 446) reported the successful treatment of the ocular symptoms of a case of Sjögren's disease with drops of cortisone suspended in normal saline. No reference was made to the effect of normal saline alone in relieving the gritty feeling of the conjunctiva.

In 1948 a case of Sjögren's disease came under my notice. The patient, a female aged 45, presented with dryness of the mouth and throat and a gritty feeling in both eyes. The former symptoms appeared to have been present for several years following temporary enlargement of both glands. Symptoms of arthritis were minimal. Examination of the blood revealed no abnormality and Schirmer's test was positive. The ocular symptoms were completely relieved with normal saline drops instilled several times a day as required. Two years later the patient developed a persistent right conjunctivitis with desiccation of the right cornea and a mossy stain with fluorescein. The right upper and lower puncta and canaliculi were cauterized. Since then no further saline drops were required for either eye. The patient is well except for occasional mild attacks of conjunctivitis and the dryness of the mouth. The former occur about twice every year, and so far have consistently responded to a sulphonamide-containing eye ointment. A glass of water accompanies each meal.

The ocular symptoms in Sjögren's disease appear to be largely due to the absence of adequate lacrimal fluid with its bactericidal and flushing properties. Parenteral administration of A.C.T.H. did not improve the eye condition in the two cases described by Cadman and Robertson,[1] and no improvement occurred when cortisone was administered subconjunctivally (Duke-Elder[2]). Until cortisone is

shown to stimulate lacrimal secretion, the beneficial effects which result from the topical application of this substance in treating the ocular manifestations of Sjögren's syndrome should be credited to the vehicle in which it is suspended.—I am, etc.,

Melbourne. S. WIENER.

REFERENCES

1 *British Medical Journal*, 1952, 2, 68.
2 *Brit. J. Ophthal.*, 1951, 35, 637.

## Specialists in Physical Medicine

SIR,—Before your paper closes this correspondence, may some of us of trainee status request the hospitality of your columns to express appreciation of the spirit and content of Lord Horder's letter (November 15, p. 1095), in which he draws attention to some points relating to physical medicine in your leading article (November 1, p. 984). Like many others of similar status in other branches of medicine, we have viewed with concern the restricted number of appointments open to us in the specialty of our choice. Even though little may be achieved as a result of this airing of views, it is nevertheless encouraging to find that the President of the British Association of Physical Medicine is aware of the potential dangers to physical medicine, and to the National Health Service at large, arising from the inadequate number of appointments now being allowed.

We of trainee status are fully alive to the misuses of physiotherapy that have given rise to recent criticism. We deplore them as much as anyone else and hope to be given adequate opportunity to prove that we have been trained in a great deal more than just "an understanding of various modes of therapy," and that the physical medicine specialist reduces rather than increases the volume of physiotherapy prescribed, while greatly increasing its effectiveness.—We are, etc.,

S. MATTINGLY. W. D. FLETCHER.
IAN H. M. CURWEN. A. B. COYER.
D. C. ARNOTT. H. F. SYMONS.

London, W.C.1.

## Radio-Iodine in the Treatment of Thyroid Carcinoma

SIR,—In their interesting paper (November 22, p. 1115) Dr. E. E. Pochin and his colleagues draw attention to the type of "undifferentiated" thyroid carcinoma, illustrated by Case 13 of their series, in which there is a high initial uptake of radio-iodine followed by a rapid discharge. In explanation they suggest that such a carcinoma might concentrate radio-iodine and convert it into organic combination, but that in the absence of follicles this would be discharged again rapidly.

If this explanation were correct, it might be expected that the level of organically bound radio-iodine in the plasma would be raised, whereas in the case mentioned it was quite low. It appears possible, however, that there is a more likely explanation for these phenomena, since they resemble closely the events which occur when radio-iodine is administered to thyrotoxic patients during treatment wtih antithyroid drugs of the thiouracil type. Under these circumstances there is a dissociation of cell functions. The thyroid cells are able to trap iodide from the plasma, but the enzyme system required for organic binding is inactivated, so that the iodide is rapidly returned to the plasma unchanged. As these cell functions have been shown to be, to some extent, independent in non-neoplastic thyroid cells it is quite conceivable that in some of the less differentiated thyroid tumours the cells may retain the ability to trap iodide and yet lack the enzyme system required for organic binding.—I am, etc.,

Liverpool, 15. G. ANSELL.

## Radioactive Tantalum Wire

SIR,—I must apologize for any suggestion which may have been inferred from my letter (November 1, p. 994) of priority in the use by myself of radioactive tantalum wire in the treatment of cases other than of the bladder. I am indebted to Professor D. W. Smithers (November 29, p. 1204) for his list of references. The object of my letter was to arouse interest in the method of treatment, which I have personally found "offers greater flexibility," as referred to in Professor Smithers's reference in the *Postgraduate Medical Journal*. In his references I was unable to find any actual successful case reports, but only radiographs.—I am, etc.,

London, N.7. ANTHONY GREEN.

## Sulfhaemoglobinaemia Following Prolonged Therapy with Isoniazid

SIR,—The following case note illustrates a hitherto unreported toxic reaction to isoniazid and also the increasingly recognized value of this drug in tuberculous meningitis (Sweetman, W. P., and Murphy, E. F.).[1]

A girl, aged 16 years, was admitted to hospital in September, 1951, under the care of Mr. L. P. Lassman, with an eleven months' progressive history of a cerebellar tumour, which Mr. Lassman removed on September 25. It was solid, the size of a large cherry, and situated in the right cerebellar hemisphere. Histological examination revealed a tuberculoma and the cerebrospinal fluid shortly afterwards showed evidence of a tuberculous meningitis. Treatment was started promptly with intramuscular and intrathecal streptomycin, together with P.A.S. Her chest *x*-ray was normal. At first her general condition improved, but by November she was drowsy, feverish, and wasted, with severe headaches and frequent bouts of vomiting. She slowly deteriorated and by February a spinal block had developed. She again improved a little after ventricular decompression, but relapsed, and, after four months of intensive therapy, the presence of epileptic fits, drowsiness, and continued high fever suggested a hopeless prognosis.

On March 31, 1952, treatment with isoniazid was commenced in addition to streptomycin as before. After a week's treatment her temperature became normal and her general condition improved. The dose of isoniazid was increased to 100 mg. twice a day. She became co-operative and ambulant, and it was finally decided to allow her home on May 29 on continuation treatment with isoniazid 100 mg. twice a day. The C.S.F. was still grossly abnormal and the prognosis was considered doubtful. She was reviewed regularly as an out-patient, and clinical improvement continued until her only remaining disability was a slight night cerebellar ataxia. In September, 1952, she was readmitted for routine investigation. At that time she had profound cyanosis which was found to be due to sulfhaemoglobinaemia. Her urine was normal, and liver function tests were within normal limits, as was also a full blood count. Isoniazid treatment was discontinued after a total dosage of 36 g. spread over six months. A month later her sulfhaemoglobinaemia had almost disappeared and she remained reasonably well. Careful inquiry did not elicit a history of the use of any other drug than isoniazid in the preceding four months, nor were there present any of the other factors detailed by Finch[2] as precipitating this form of cyanosis.

I am grateful to Mr. Lassman for asking me to see this patient and giving me permission to publish the case.—I am, etc.,

Newcastle. L. FEINMANN.

REFERENCES

1 *Lancet*, 1952, 2, 160.
2 *New Engl. J. Med.*, 1948, 239, 470.

## Lumbar Intervertebral Disk Protrusion

SIR,—It was not to further the cause of osteopathy that I was prompted to write my letter (October 18, p. 882), but to express my views on the relationship of "disks" to sciatica and my views on treatment of the latter. I put forward my views because I think that the diagnosis of "slipped disk"—or, as I prefer it, "herniated disk"—as a cause of sciatica is given too often. I say this because so many patients, when I ask them what is wrong, will tell me "a slipped disk" before they tell me that they have a pain in their leg or in their back.

Dr. Harris Avery (November 1, p. 992) states that "most backaches respond to one single manipulation" and condemns too frequent manipulation. I agree with both these statements provided the patient is seen soon enough. If, however, the condition has become chronic over many months, or even years, I find that several manipulations, not oftener than once per week,

and less often as soon as possible, are required to bring about a satisfactory result. Dr. Vincent Hyslop (November 15, p. 1098) wants us to direct our treatment to muscle groups rather than bones and joints, and states that if there is a postural alteration the muscle groups must take on the job of holding the pre-injury posture and will cause a condition of chronic muscle spasm. Surely, then, the way to remove this muscle spasm is by returning the postural alteration to its normal and natural pre-injury position. If there is a pelvic tilt present, this can be remedied by using a heel lift—often with very good results in suitable cases.

Dr. James Cyriax's letter (November 1, p. 992) appears to be directed more against osteopathy than against the diagnosis of "disk" in cases of sciatica. I do not want to enter into a discussion on osteopathy, but there are one or two points in his letter on which I would like to comment. In osteopathy, as in all branches of the healing arts, research has altered original views, and the teaching that a subluxated or locked vertebral joint causes direct pressure on a nerve is no longer recognized. Research is still going on in America as to the actual cause of the stimulation of the nerve in the area of joint involvement, but it is thought to be due to a chemical change in the tissues involved. When the joint is returned to its full normal range of movement this chemical change subsides and the irritation disappears. Dr. Cyriax groups together "osteopaths and other laymen," and, while the osteopath has little or no recognition in this country, I think it is only right that we appreciate the difference between the American trained osteopath and the bone-setters mentioned later in his letter. In 1920 the course in the recognized osteopathic colleges in America was lengthened from three to four years and now the student who qualifies as an osteopath has as full a training in all branches of medicine as the student who qualifies as a doctor.

Dr. Cyriax goes on to say, "Luckily they do not have this effect, but they hurt the patient to no purpose." This is rather a harsh, and I think unfounded, statement, or else my patients are too polite. Also, if patients were hurt to no purpose I hardly think that they would return for further treatment. He then says that students of physiotherapy have been grounded in spinal manipulation under Dr. Mennell before the war. It is interesting to note that in the preface to the second edition of volume 1 of Dr. Mennell's book on joint manipulation he writes, "To one of my correspondents I owe useful suggestions of this type, and these came from a practising osteopath; these suggestions have been adopted, with a single exception."

I should like to say again that I feel that the diagnosis of "herniated disk" is made too often in cases of sciatica. The narrowing of a disk space which may be seen on *x*-ray examination is not always indicative of a herniated disk, and even if it were I presume that the herniation can take place in directions other than posteriorly and so cause no symptoms.—I am, etc.,

Glasgow, C.3. DAVID M. GRAHAM-SERVICE.

## B.C.G. and Tuberculous Meningitis

SIR,—Dr. H. G. Calwell (December 6, p. 1256) appears to doubt that tuberculous meningitis can occur in children who have been successfully vaccinated with B.C.G. This statement has repeatedly been made and reported cases are certainly rare. Ustvedt (1951) was able to find reports of 21 cases of tuberculous meningitis in vaccinated individuals. In only one of these cases was there any real evidence of B.C.G. having failed completely to protect. In the other 20 cases it was reasonably certain that the vaccination had been carried out during the anergic phase of disease in the incubation period of a naturally occurring infection. I am at present investigating a case of tuberculous meningitis occurring one year after successful vaccination with B.C.G. in a young child.

In my opinion over-optimistic claims for B.C.G. are damaging to the reputation of this preventive measure because any exceptional cases which occur will receive undue prominence, and will only serve as ammunition for the antagonists of B.C.G. in their attempts to discredit this vaccine. It is better to make no extravagant claims for B.C.G., but merely to state that it raises resistance to the disease and makes serious forms of tuberculosis very unlikely.—I am, etc.,

Edinburgh, 9. J. WILLIAMSON.

REFERENCE

Ustvedt, H. J. (1951). *The Conference on European B.C.G. Programmes.* Heinemann, London.

## Treatment of Pediculosis Capitis

SIR,—Dr. Godfrey Bamber (November 29, p. 1198) in describing treatment for pediculosis capitis advises an application of the D.D.T. emulsion to the hair and scalp, to be left for 24 hours before the head is washed. He goes on to state that sufficient of the D.D.T. "remains absorbed on the hair and egg shell to kill larvae when newly hatched."

A few years ago when D.D.T. first became available for this treatment tests were carried out by the School Health Department in Liverpool, and these tests revealed that the procedure as described did not result in sufficient D.D.T. remaining in the hair to kill the larvae as hatched. Our experience showed that in order to accomplish the killing of all the larvae as they hatched two applications at weekly intervals are necessary, and that if the hair is to be washed it should be washed before application is made.

I think one further matter which should be stressed in the treatment of pediculosis capitis is that infestation of an individual usually means that there is infestation amongst other members of the family, and therefore any treatment to be effective needs to be a family affair.—I am, etc.,

Liverpool, 18 G. STUART ROBERTSON.

## The Surgery of Varicose Veins

SIR,—Mr. G. H. Colt's letter (November 29, p. 1204) raises two points of interest. First, he advises the Babcock method for stripping veins, which was given up by the majority of surgeons many years ago, chiefly owing to the fact that the vein tended to break and so cause haematomas. I suggest that if he were to use the large-headed stripper inserted at the ankle, and extracted the vein by the "concertina" method, he would have no trouble with the vast majority of cases and the whole vein would be avulsed in a few seconds without difficulty or haemorrhage.

Regarding sclerosants, Mr. Colt has preference for quinine injections, but I suggest that when stripping is performed in the way I have suggested the call for sclerosants should be small. Those small branches which have evaded avulsion, however, may well be treated by a phenol sclerosant, which has fewer of the disadvantages of the other injection materials.—I am, etc.,

London, W.1. R. ROWDEN FOOTE.

## Continuous-feed Aneurysm Needle

SIR,—I was most interested to read Mr. D. J. Tibbs's description (November 29, p. 1201) of his continuous-feed aneurysm needle. There is no doubt that this instrument will be of considerable value in facilitating and simplifying that most frequently carried out step in surgery, the ligature procedure, and the ligation and division of vascular tissue.

Mr. John Devine described a similar sort of instrument in the *Australian Medical Journal* about four years ago. I came across the article at the beginning of this year and was struck with the possibility of increasing the usefulness of the instrument by modification. Accordingly I sought the help of A. L. Hawkins & Co., surgical instrument makers, and asked them to make me an instrument like it, but with the curved tubular end altered to the shape of a Kocher's dissector—or slightly larger and more like Mr. Harold Dodds's useful director dissector. The advantage of this feature is that a wide segment of tissue can be isolated for double ligation and division. My design differed from that of Mr. Tibbs's in another respect. I asked the instrument-maker to include two spools in the handle so that two threads instead of one emerged on either side of the tip of the instrument. This simplifies further the procedure of double ligation and division of tissue.

However, Mr. Tibbs's continuous-feed aneurysm needle has the great advantage of simplicity and a wide field of usefulness. It is an instrument which fulfils a long-standing need, and many surgeons will be grateful for his contribution to surgical technique.—I am, etc.,

London, E.11. D. LANG STEVENSON.

## Protein Deficiency in Negro Infants

SIR,—In your leading article (October 11, p. 821) on protein deficiency in negro infants, you state: "In several of these publications the term kwashiorkor, originally introduced by Williams, has been adopted, but some have doubted whether she was correct in applying the term to the disease she described." May I point out that it was not Williams who applied this term to the disease? It is the name by which the Accra people call this condition. I was merely the transcriber, not the inventor, of the term. If you will refer to the article in which the word was first used, you will see that I also transcribed the aetiology which was given to me: "This is the sickness the older child gets when the next baby is born." It was stated[1,2] that the redness of the hair or the skin is not specific to the disease, nor is it essential. My impression was that the "redness" *might* refer to the red, raw patches where the "crazy pavement" had peeled off, but it may indeed be that, as MacPherson[3] says, it refers to bedevilment and not to the physical signs at all.

I entirely agree that too much attention has been given to the altered pigmentation. Certainly this is more common in East African cases than in the West African, Indian, and West Indian. I still believe that some of the more conspicuous differences may be due to variations in mineral elements which have not yet been studied so far as I know, or to other defects.

Dr. E. Kahn, in the *Lancet* of September 20, makes an appeal for more discrimination in the use of the word "kwashiorkor." He is quite right in stating that nutritional diseases may be primarily due to defective diet, or secondarily to some condition that interferes with digestion or assimilation. It is most important for doctors to learn to distinguish between a primary and a secondary condition. Too often one sees death certificates issued for "pneumonia" when the primary condition is really worms or malnutrition and the pneumonia merely terminal, in fact a symptom and not a cause of death. But it is better to be too vague than to give specific names in the absence of investigations. Already confusion has been caused when names are adopted before they are justified by available evidence. To give names that are too specific, and that give undue emphasis to one symptom, is to run the risk of ignoring the time factor in disease.

Diseases, and most of all nutritional diseases, go through periods of gestation, growth, and development and then decay. At any stage there may be regression. They are liable to mutations according to attendant circumstances, the way of both other nutritional factors and intercurrent infections and infestations. Too often textbooks are written which give an idea of a disease being a clear-cut, immutable picture. It is the task of doctors to distinguish between the basic disturbances and their variations. Many cases of the kwashiorkor group go through stages of oedema, of dermatosis, and of hair changes. The main pathology is the damaged liver or (according to Davies[4]) the pancreas. It is probably essentially due to some protein or amino-acid imbalance. But to wait for all the described symptoms to appear before recognizing the group to which the disease belongs is to miss a large number of early cases.

Dr. Kahn says, "Kwashiorkor means red boy." I think he is wrong. It only means "red boy" in so far as "malaria" means "bad air." To my clientele, and to me, kwashiorkor means a sinister and often grave disease, which may be extremely insidious. It may start with slight swelling of the dorsum of the foot, or with unaccountable peevishness, or with a failure to gain weight. Unless the doctor recognizes this as early kwashiorkor it will be fatal kwashiorkor. Until the biochemists give us more specific details, it does not much matter what we call it as long as we recognize it.

I am in entire agreement with the last paragraph of your leading article—i.e., the need for prevention. Considering how much time, money, effort, and the best of personnel are being spent on the minutiae of research, it is shocking beyond belief that so comparatively little has so far been spent on prevention and in methods of prevention. Dean's work on curative diets is invaluable, but how much work has been done in methods of applying these discoveries?

Both national and international medical services are dazzled with "stamping out disease," and to what end? People who were dying in their hundreds of plagues and poxes are now living still more miserably in their thousands afflicted with worms, malnutrition, and skin diseases. Medical people have so ignored the social function of medicine that they have scarcely any right to take part in constructive planning. Only recently addresses by Professor Andrew Topping[5] and Mr. John A. Oliver[6] have emphasized this. "We hardly know what we are doing or why we are doing it, much less where it is leading us." You state that a second conference to discuss malnutrition in African mothers is to be held this year. Is there any hope that this conference will propose some experiments not only on what is wrong but on how to improve the situation?—I am, etc.,

Jamaica. CICELY D. WILLIAMS.

REFERENCES

1 *Lancet*, 1935, 2, 1151.
2 *Arch. Dis. Childh.*, 1933, 8, 423.
3 *Lancet*, 1951, 1, 53.
4 Ibid. 1948, 1, 317.
5 Ibid., 1952, 2, 679.
6 Ibid., 1952, 2, 669.

## Treatment of Pernicious Anaemia

SIR,—It is well known that cases exist which have been termed "idiopathic refractory megaloblastic anaemia" and which show characteristic features of pernicious anaemia, but which respond only to crude liver extracts by mouth or sometimes to folic acid. Dr. R. O. Gillhespy (November 29, p. 1204) has given full details of another such patient. He does not, however, give any example of cases in which liver injections have proved more effective than injections of vitamin $B_{12}$ in maintenance therapy. His experience with cases which are refractory to both liver extracts and vitamin $B_{12}$ does not alter our opinion that it is preferable to use vitamin $B_{12}$ in the usual case of pernicious anaemia which responds to either form of treatment.—We are, etc.,

E. K. BLACKBURN.
JOYCE BURKE.
CISSIE ROSEMAN.
E. J. WAYNE.

Sheffield, 10.

## Infective Endocarditis Due to Bact. Faecalis Alcaligenes

SIR,—I have read with great interest the report of a case of infective endocarditis due to *Bact. faecalis alcaligenes*, by Dr. A. C. E. Cole and Mr. C. Marshall (October 18, p. 867). The case confirms the potential pathogenicity of the organism as has been reported from time to time. In this connexion it seems interesting to recollect our observations at Calcutta (Banerjee and Sarkar, *Indian med. Gaz.*, 1949, 84, 384) on the frequency of occurrence of the organism in various pathological materials. It was isolated in pure culture from 27 samples of blood from patients suffering from enteric-like fever, from 20 samples of urine, 3 of cerebrospinal fluid, 2 of pus, 2 of ascitic fluid, one of synovial fluid from knee-joint, and from one sample of bile. The strains were sensitive to streptomycin *in vitro* and the antibiotic was used more successfully in the treatment of some of our cases. So it appears that *Bact. faecalis alcaligenes* is not as harmless as it is usually thought to be.—I am, etc.,

Calcutta J. K. SARKAR.

## Oxygen Administration in Asphyxia Neonatorum

SIR,—The method of inflating the lungs described by Dr. G. S. A. Knowles (November 22, p. 1151) has two major disadvantages: first, that introduction of the catheter no further than the mouth will cause any mucus remaining in the pharynx and any regurgitated stomach contents to be carried down the trachea by the influx of oxygen; secondly, that although it may be "almost impossible" to obtain an airtight fit around the catheter the consequence of such an accident could be disastrous.

It must be remembered that the standard reducing valve with which oxygen cylinders are fitted issues the gas at a pressure of about 14 lb. per square inch (6.3 kg. per 6.4 square cm.). I have seen fatal injury to the lungs of a newborn infant result from the use of the excellent conical rubber facemask of the type used at Queen Charlotte's Maternity Hospital, even though this mask has a large

opening as a protection against the oxygen pressure. I found that this was due to the soft rubber tubing between the oxygen cylinder reducing valve and the mask becoming momentarily kinked and then released. These conditions reproduced experimentally with a stillborn infant caused a momentary pressure of 60 mm. of Hg in the trachea, recorded by a manometer; this was in spite of the loose-fitting mask with its safety aperture. This danger can be avoided by using only pressure or other unkinkable tubing in any apparatus, whatever its nature, which supplies oxygen from a reducing valve for resuscitation of the newborn.—I am, etc.,

Northampton. E. A. J. ALMENT.

### Advertising in Examinations?

SIR,—We noted that in the recent examination for Part II of the Diploma of Anaesthetics certain "trade names" of drugs were added in parentheses after their official pharmacopoeial titles. However, not more than one manufacturer's trade name was mentioned in each case. Surely, if this practice is adopted, then equal recognition should be given to all manufacturers.

In our opinion it should be self-evident that a candidate for a higher diploma ought to know the official name of any drug he is expected to use, and therefore there should be no necessity for the inclusion of trade names in an examination paper.—We are, etc.,

H. C. CHURCHILL-DAVIDSON.
London, S.E 1. W. D. WYLIE.

### "National Formulary" Index

SIR,—Many practitioners and pharmacists are daily irritated by the system adopted in the new *National Formulary* of indexing the different sections under English headings. The authors claim in their preface that this brings together the eye drops, eye lotions, and eye ointments, but the practitioner will notice that the skin creams, skin lotions, skin ointments, and skin powders are as far apart as ever. Thus when the practitioner or pharmacist is seeking an unguentum he has to reflect that an unguentum is an ointment and will be found somewhere near the mixtures. If Latin titles continue to be used—as I hope they will—surely it is simplest to index the sections also under their Latin titles and so make the whole book self-indexing.

As our *National Formulary* is in daily and hourly use, simplicity of arrangement is essential for easy reference. I cannot imagine any commercial firm adopting such an inconvenient arrangement. Practitioners will have noticed that Latin is now only used for the main titles of the preparations, and that all the rest—headings, subtitles, and ingredients—is in English. The profession is in fact being steadily conditioned to the sole use of English for pharmaceutical preparations, and it may well be that the next edition of the *Formulary*, and possibly of the *British Pharmacopoeia*, may be entirely in English. Such a revolutionary change would bring us into line with American practice, but if this change were accepted there would be one system for the English-speaking world and another for the rest of the world. It would be impossible then for the W.M.A. or the U.N. to establish an international nomenclature. We could hardly expect the rest of the world to adopt an English nomenclature. Latin has always been the traditional language for medical and pharmaceutical nomenclature, and a prescription in Latin can be dispensed (perhaps with local equivalents) in any part of the world. Latin, too, is concise and the traditional abbreviations are labour-saving for all concerned. Is there any acceptable English abbreviation for ʒss t.d.s.p.c.? Further, it is undesirable to use plain English for prescriptions because, as every manufacturing pharmacist knows, there is still an important element of magic or psychology in medicine, and a prescription in Latin (which the patient says he does not understand) has a much greater therapeutic value than one in the mother tongue.—I am, etc.,

Leeds. J. H. E. MOORE.

## POINTS FROM LETTERS

### Otitis and Ear Syringing

Mr. A. TUMARKIN (Liverpool) writes: Syringing wax is usually regarded as a trivial procedure. It certainly can be, provided the doctor has really learnt how to do it and has adequate instruments and enough time. There are, however, many pitfalls, and my advice to my busier general-practitioner colleagues is to refer all cases—except the simplest—to an E.N.T. clinic. I myself would far rather syringe a hundred ears than try to explain away a single acute otitis due to syringing. It follows that medical practitioners should not be expected to syringe ears at recruitment or pensions examinations. Such cases could quite properly be referred to the nearest E.N.T. department by arrangement. It is indeed desirable that far more doubtful cases should be referred on recruitment for a consultant opinion and possibly an audiogram. Many soldiers with quiescent otitis media were recruited during the last war. Their ears were only too liable to break down and suppurate. These men were poor value as soldiers—many were invalided out and promptly claimed pensions, which had to be conceded. I am convinced that much waste of money and man-power, and indeed much heart-burning, could be avoided if recruiting authorities called more freely on the services of the special departments.

### Manipulation of Joints

Dr. N. B. EASTWOOD (Lowestoft) writes: The recent letters from Dr. D. M. Graham-Service (October 18, p. 882), Dr. Harris Avery, and Dr. James Cyriax (November 1, p. 992) bring out certain facts which anyone who practises, even in a minor way in this field must discover. The first is that manipulation of the appropriate joint in the conscious patient is able to cure safely and immediately a number of common diseases affecting ligaments, muscles, and nerves (many cases of fibrositis, neuritis, intercostal neuralgia, low backache, lumbago, etc.) in which pain is the leading symptom and in which physical signs are not always as obtrusive as one would wish. The second fact is that there is little agreement as to the nature of the "manipulable lesion," or indeed whether one can speak of a single type of manipulable lesion or should rather postulate the existence of a number of different types of manipulable lesion. The third point that arises is that knowledge of manipulative techniques is not widely diffused within the profession, and it would be suitable, as Drs. Cyriax and Avery observe, if those responsible for the education of the next generation of practitioners were to take steps to give formal tuition on this subject and not allow this work to go by default to unregistered practitioners. Mr. R. S. Henderson's paper (September 13, p. 597) is not, of course, an exhaustive account of conservative treatment, and perhaps the most important omission in this regard is that no mention is made of steps taken to correct the circumstances which impose bad postures on his patients in their daily lives. The furniture (beds, tables, chairs, benches, etc.) imposes bad postures on them and may splint them thus for hours. While Mr. Henderson rightly refers to the beneficent effect of correct splinting with corsets and plaster jackets, he overlooks the detrimental effect of sleeping in a curved splint known as a spring bed.

### Acute Laryngotracheobronchitis

Dr. J. S. TAYLOR (Guildford) writes: I was interested to read the paper on acute laryngotracheobronchitis (November 15, p. 1064). I noted that in some of their cases Dr. J. N. Briggs and Mr. J. R. Heseltine used a combination of penicillin and aureomycin. This confuses me, as I recall that in a previous paper by Dr. J. E. Cates and others (*Journal*, 1951, 1, 653) on the treatment of penicillin-resistant bacterial endocarditis it was found that aureomycin inhibited the bactericidal effect of penicillin. Does this relationship only apply to certain organisms, of which *Str. viridans* is one, or is it a general rule?

### Post-epileptic Automatism

Dr. JAMES SHAW (Edgbaston, Birmingham) writes: Dr. Clifford Allen's letter (November 22, p. 1148) reminded me of an occasion when I came across an epileptic in the throes of a fit. I was alone. I bent down to undo his collar, when to my amazement he recovered very suddenly. Jumping to his feet with a fiendish look on his face, he seized me round the throat with both hands and proceeded systematically to strangle me. I had the presence of mind to push my knee into his stomach, making him release his grip. Fortunately a third person then came upon the scene. When he regained his wits, this man, a confirmed epileptic, had no knowledge of attacking me. When I broached the subject to him on later occasions he frankly disbelieved me. His family were apparently not astonished at the incident, and said they always kept out of his way after a fit.

# Obituary

## F. C. EVE, M.D., F.R.C.P.

Dr. Frank Eve, consulting physician to the Hull Royal Infirmary, died on December 7 in Beverley, where he had been living for some time in retirement. From Bedford School he won a scholarship to Emmanuel College, Cambridge, taking a first class in the Natural Sciences Tripos in 1893. After working as a demonstrator at Yorkshire College, Leeds, he completed his clinical work at St. Thomas's Hospital, where he was a university scholar, and graduated M.B., B.Chir. in 1900. After holding a resident appointment at St. Thomas's he took the M.R.C.P. in 1901 and proceeded M.D. in 1903. He went to Hull as house-physician to the Royal Infirmary in 1900 and was appointed honorary physician to that hospital in 1906, a post which he held until he became consulting physician in 1926. He was also honorary physician to the Victoria Hospital for Sick Children for many years, taking a great interest in the study of clinical psychology among the young patients. He was elected F.R.C.P. in 1915. In 1927–8 he was president of the East Yorkshire and North Lincolnshire Branch of the B.M.A.

Eve maintained his interest in physiology and in biological science throughout his life. He published many papers on different branches of his work: "Early Diagnosis of Pernicious Anaemia by the Halometer" and "Diabetic Treatment Simplified" may be mentioned. But his best-known work on the rocking method of artificial respiration is of outstanding importance. This method, which he described in 1932, became known as Eve's method and aroused great interest not only in this country, where it has been adopted by the Royal Navy, but also in many parts of the Continent and in America. He published several papers in this *Journal* about the method and modifications of it. Briefly, the method relies on the movement of the diaphragm when the patient's body is rocked in a see-saw fashion on a stretcher supported centrally on pivots fixed to a trestle. During the war Dr. Eve described how his method could be carried out in small rescue-boats (*B.M.J.*, 1945, 1, 21). Only a few weeks ago he wrote a letter (October 18, p. 879) urging perseverance of artificial respiration in electrical accidents.

Dr. Eve was a highly cultured man, whose reading was wide and deep. He talked on many subjects with authority and with a wisdom which impressed his hearers, while the breadth of his culture was shown not only by the many useful medical gadgets he designed but by the pleasure he took in the work of his fellow scientists in the biological field of study. The last few years of his life were spent in a house adjacent to a rookery, and even when in failing health he studied the comings and goings of these birds with the hope of being able to write a book on their habits. In his younger days he was a keen fisherman, golfer, and skier, and was a past president of the old Hull Golf Club. Dr. Eve is survived by his wife and only son, both of whom are members of the medical profession.—R. G.

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Colonel ROBERT MILNE DICKSON, who died suddenly on November 8 at his home in Edinburgh, was brought up in Newport, Fife, later becoming a student at the Dundee Medical School, and graduating M.B., Ch.B. at the University of St. Andrews in 1906. After holding appointments at Dundee Royal Infirmary, he entered the R.A.M.C., and was serving in India when war broke out in 1914. Recalled to serve in Europe, he was mentioned in dispatches for attending to wounded while under fire, and later he was severely wounded himself. During his convalescence he wrote a thesis which enabled him to proceed M.D. in 1916, and then began to study ophthalmology, taking the D.O.M.S. in 1921. He was appointed O.B.E. in 1919. For five years he was ophthalmic specialist at Queen Alexandra Hospital at Millbank, an appointment which gave him opportunities for work at Moorfields. A transfer to Ceylon as senior medical officer interrupted his work in London, but his talent for administration proved to be of lasting value to the Army medical organization in the island. He retired from the Army in 1937 and became the first director of the Ross Foundation, established at Edinburgh for the study of the prevention of blindness. He was recalled to the Army in 1939 and was appointed A.D.M.S., Edinburgh area, a post he filled with distinction until for reasons of health he retired in 1941. Returning to his work at the Ross Foundation, he made a special study of conditions in factories and mines. His good humour and friendliness made him an acceptable companion and enabled him to work in complete harmony with research workers and other colleagues. He leaves a widow.

Dr. WILLIAM HUGH WILLIAMS, who died at Taldrwst, Anglesey, on October 27 after a short illness at the age of 84, was a native of Anglesey, being born there on August 2, 1868. He studied medicine at the University of Edinburgh, where he graduated M.B., C.M. in 1894. When he commenced general practice the motor-car, the telephone, and the *x*-ray film were unknown. It was most exceptional to send a patient to hospital, and a "second opinion" meant consulting with a colleague in a neighbouring practice. For 44 years he practised in his native county, and he took particular pride in his dispensing, an interest dating from an early apprenticeship to a druggist. Before the days of standardized products he used to prepare his own infusions of digitalis, using the foxglove growing in the locality. He proceeded M.D. in 1914, choosing as the subject for his thesis the influence of soil on the incidence of cancer, a theme with a very modern ring about it. By nature quiet and retiring, he was a deeply religious man "who went about doing good and healing" with a characteristic lack of ostentation. He is survived by his wife, who for over 40 years was his constant helpmate and companion.

Dr. MARY HELEN CAREW HUNT, who died at Church Handborough, Oxfordshire, on October 17 at the age of 85, was the younger daughter of the late Mr. A. W. Cruikshank, of Montrose, and received her professional education at the Royal Free Hospital School of Medicine for Women in London, taking the Scottish triple qualification in 1895. In the following year she obtained the M.D. of the University of Brussels and the L.M. Rotunda. She practised first in Reading and then in Oxford. In 1909 she married Canon R. W. Carew Hunt, vicar of St. Giles', Reading. He died in 1924. Dr. Carew Hunt practised in Oxford for many years, and was particularly interested in the development of infant welfare clinics throughout the county. She was a vice-president of the Medical Women's Federation.

We are indebted to Dr. MABEL L. RAMSAY for the following appreciation: I could not let the death of Dr. Mary Carew Hunt pass without writing some brief appreciation of her and her work in Oxford. She was one of the pioneer women doctors sent forth by the Royal Free Hospital School of Medicine for Women, and she was in fact the first woman general practitioner in Oxford. I first met her when she was a member of the council of the Medical

Women's Federation. She had helped to found the Oxford Association, and she welcomed me at her home in Woodstock Road when a council was held in Oxford. It was a memorable occasion when she, as president of the Oxford Association, and I, as president of the Medical Women's Federation, welcomed many notable people, professors and graduates, at Rhodes House. I would like to describe her as "a most gracious lady," for she truly had a very gracious and sweet personality, though perhaps somewhat shy and reserved. But once she had formed an opinion on any matter she held it very firmly as the right one. She would never praise anything, however lauded by others, if she thought it bad. She just kept silent thereon. In practice she was much loved by her patients and colleagues. Subsequently, after she retired, I had the pleasure of being welcomed several times at Church Handborough, where she lived and where she made a wonderful garden. At the age of 81 she met me at the station, a trim, upright figure, and she drove me in her car at 50 miles an hour to her home. Later, alas, a cerebral apoplexy affected her and she had a semi-paralysed leg. From this she recovered very well, retaining a very alert brain. Only a year ago I visited her and saw her sitting in her beloved garden making light of her disabilities.

Dr. J. S. INGLES, a well-known general practitioner in Worcester, died suddenly on November 12 at the age of 58. John Stewart Ingles was born in Maxwelltown, Dumfriesshire, on August 18, 1894. After taking an arts degree at the University of Edinburgh he began the study of medicine, and graduated M.B., Ch.B. in 1925. During the first world war he had served as a combatant in France and Salonika with the Argyll and Sutherland Highlanders, and he suffered years of indifferent health and underwent many operations as a result of wounds received in action. After obtaining his medical degree he went into general practice in Worcester about 25 years ago. In addition to his practice Dr. Ingles was for some 14 years assistant radiologist to Worcester Royal Infirmary, and he also held many local public medical appointments, including those of police surgeon, certifying factory surgeon, and Post Office medical officer. He was also for a time medical officer to the local detachment of the British Red Cross Society. Keenly interested in all forms of sport, he willingly performed the duties of honorary medical officer at local football, boxing, and racing events. Although essentially a man for men's company and an excellent mixer in all company, nothing suited him better by way of recreation than a quiet country drive in his car or a day's fishing followed by a good farmhouse tea and a yarn. Within a jovial exterior Ingles carried a heart and understanding, warm, sympathetic, and tender towards all who sought his aid and advice, so that his patients accepted him in their homes as a good and cheerful friend. His sudden death just when he was apparently convalescing from a short illness came as a great shock and grief to his many acquaintances. He is survived by a widow.

# Medical Notes in Parliament

### Compulsory Radiography of Miners

Mr. E. LEATHER, on December 9, raised the question of a compulsory regular *x*-ray examination of miners. He said that sufficient technicians were available and sufficient equipment could be made available within six months. If it was not practical to do this for all districts, it was practical in the areas which needed it most. The principle of compulsion was of importance. It would be easy to say to every miner that he must have an annual medical check-up, such as many employers in other industries gave their employees. It would be simple to hand each man as he went through the *x*-ray unit a leaflet explaining that in his own interests he should see year after year that he was keeping fit. Such examinations had been carried out in other countries for many years.

Mr. H. HOLMES hoped that the National Coal Board would not enforce compulsory examination. The vast amount of work done was extending and gave great satisfaction to the National Union of Mine Workers.

### Ministry Pressing On

Mr. L. W. JOYNSON-HICKS, replying for the Ministry of Fuel and Power, assured the House that the Ministry was pressing on with the utmost practicable rapidity. In South Wales all new entrants to the industry were radiographically examined. Up to the present they had been dealt with by miniature radiography by the regional hospital board, but their examination had now been transferred to the National Coal Board Medical Service. In future they would be examined by full-size radiography. The Coal Board expected to be able to examine radiographically every new entrant into the industry, in whatever part of the country, by 1957. A second scheme was carried out by regional hospital boards in respect of thoracic troubles. This was the miniature radiographic scheme, by which on further examination small numbers of pneumoconiosis subjects had been located. A third scheme, coming into operation next month, by the Radiological Subcommittee of the National Joint Pneumoconiosis Committee, would sponsor tests to ascertain the value of different sizes of radiographical examination.

Pneumoconiotics who had gone back into the mines to the number of 8,000 were subject to periodical radiological examination. Then there were special-purpose projects by the Pneumoconiosis Research Unit, such as the one at Rhondda Fach. By means of the Industrial Injuries Scheme operated by the Ministry of National Insurance, 50,000 radiographs had been taken and 13,150 cases had been diagnosed. A 20-pit scheme was due to come into operation, initiated by the National Joint Pneumoconiosis Committee, financed by the Coal Board. Under this scheme, dust conditions would be examined regularly in addition to radiographic examination of 20,000 miners working in these 20 pits, to relate the incidence of pneumoconiosis to working conditions. This was a general attack on the problem, and Dr. A. L. Cochrane was acting as scientific adviser to the Coal Board. The Pneumoconiosis Research Unit was advising on equipment. The compulsory scheme was not the best way to tackle the problem.

### Hospital Costing

On December 11 Mr. A. BLENKINSOP asked the Minister of Health whether he had given consideration to the recent reports on hospital costing by the King Edward Fund and the Nuffield Trust.[1]

Mr. IAIN MACLEOD answered that he was consulting the Teaching Hospitals Association, the Association of Hospital Management Committees, and each regional hospital board about these reports. In particular he had asked for their views on the value to hospital administration of the system of departmental costing advocated in each report, its practicability, and its likely cost in money and manpower.

### Delay in Whitley Councils

Mr. E. A. HARDY, on December 11, asked whether the Minister of Health was aware of the delay in reaching decisions by the Whitley Councils of the National Health Service, and the delay in putting into operation the awards made.

Mr. MACLEOD answered that the Whitley Councils reached their decisions by negotiation between the two sides, and in many cases this took time. He did not think there was avoidable delay in reaching decisions or in putting them into operation.[2]

[1] See *British Medical Journal*, December 6, p. 1247.
[2] See *Supplement*, p. 233.

### Hospital Staffing

Mrs. E. BRADDOCK, on December 11, asked whether the Minister of Health knew of the anxiety caused to hospital management committees by the suggestion that there was to be reduction in hospital staffs and that no replacements were to be made within existing hospital establishments without the consent of regional hospital boards; and if he would consult with the association of hospital management committees before taking any action in this matter.

Mr. IAIN MACLEOD replied that hospital boards and committees had already received his memorandum on economy in staffing.

On December 11 Mr. H. HYND drew attention to the position of hospital officers who accepted the national negotiated rate of salary under the National Health Service Act, 1946, and whose positions had since been down-graded, with the result that they could not obtain an increase in accordance with the increase in the cost of living.

Mr. MACLEOD replied that this was in accordance with a recent agreement of the Administrative and Clerical Whitley Council. He did not know of any negotiations for new arrangements for the officers concerned.

Mr. A. BLENKINSOP, Mr. SOMERVILLE HASTINGS, Dr. A. D. D. BROUGHTON, and other Members have tabled a motion: "That this House expresses its alarm at the decision of the Government to impose further limitations upon hospital expenditure by reducing hospital staffs, which must lead to a fall in the standard of care or in the number of hospital beds, and calls upon the Government to review this decision without delay."

### Discrepancy in Prescribing

Mr. V. F. YATES, on December 11, asked if Mr. Macleod was aware that there was still considerable discrepancy in the practice of doctors as to the number of prescriptions they put on one form, and if he would alter the doctors' terms of service to ensure that greater conformity is reached in this respect.

Mr. MACLEOD answered that he was aware of this discrepancy, but not satisfied that an alteration in the doctors' terms of service would be an advantage.

## Medico-Legal

## THE DYING DECLARATION

BY

**WALTER SIMPSON, L.M.S.S.A., D.O.**

"O! but they say the tongues of dying men
Enforce attention like deep harmony:
Where words are scarce, they are seldom spent in vain,
For they breathe truth that breathe their words in pain.
He that no more must say is listen'd more
Than they whom youth and ease have taught to glose;
More are men's ends mark'd than their lives before."
Gaunt in *Richard II*, Act 2, Sc. I.

In trials of homicide statements made by the deceased person (whose death is the subject of the charge) relating to the cause and circumstances of his death are admissible in evidence, provided it is clearly proved by the party offering them in evidence that the deceased had at the time abandoned all hope of recovery. Such statements are known as "dying declarations."

The admission of the dying declarations of the slain man respecting the cause of his death seems to have been fully recognized as early as 1697. At the Old Bailey in that year it was held that where a painter in Lincoln's Inn Fields was indicted for having killed two bailiffs their "dying words" were admitted as evidence against him (*vide* Hargrave MSS. in British Museum. No. 146, f. 162). Such declarations were admitted because the religious awe inspired by the approach of death is deemed fully equal to the sanction of any judicial oath.—*R.* v. *Woodcock*, 1789. Hence the rule has been held to be inapplicable to declarations made by a child aged 4 years.—*R.* v. *Pike*, 1829.

In that case Park J. said, "We allow the declaration of persons in articulo mortis to be given in evidence, if it appears that the person making such declaration was then under the deep impression that he was soon to render an account to his Maker. Now, as this child was but 4 years old, it is quite impossible that she, however precocious her mind, could have had the idea of a future state which is necessary to make such a declaration admissible."

But a dying declaration of a child aged 10 years was held to have been rightly admitted.—*R.* v. *Perkins*, 1840.

The more modern tendency, however, is to reject dying declarations except in the clearest cases. Thus in *R.* v. *Jenkins*, 1869, Byles J. said, "These dying declarations are to be received with scrupulous, I had almost said with superstitious, care. The declarant is subject to no cross-examination. No oath need be administered. There can be no prosecution for perjury. There is always danger of mistake which cannot be corrected."

It should be remembered that the declaration may even exculpate the prisoner—for example, by a confession of suicide, intentional or accidental.

The dying declarations of a wife or husband are admissible as evidence against the husband or wife, when charged with the murder or manslaughter of the person who made the declaration. There is no need for the declaration to show on its face that the declarer knew he was dying.—*R.* v. *Woodcock*, 1789.

### Hopeless Expectation of Death

It must be proved that the man was dying and there must be a settled hopeless expectation of death in the declarant *per* Willes J. in *R.* v. *Peel*, 1860, approved by Court of Criminal Appeal (1909) *R.* v. *Perry*. The principle is this: to make such a statement admissible it must appear that it was made under the influence of a settled—that means not wavering—and hopeless—which means where hope is abandoned—expectation of death. The essence of the sanction which the law gives to such a statement is that when it was made all hope of life is abandoned.—Darling J. in *R.* v. *Austin*, 1912. *Appeal Cases 8 Cr. App. Rep.*, p. 28.

The question whether the deceased had such a belief in impending death as to make a declaration admissible *is for the judge*, and not for the jury.—*R.* v. *Hucks*, 1816.

It is no objection to the admissibility of a dying declaration that it is made in answer to leading questions, though that fact may affect its weight as evidence.—*R.* v. *Smith*. 1865.

In *R.* v. *Mitchell*, 1892, Cave J. refused to admit a written declaration in a narrative form, signed by the deceased and taken down at the time from her answers to questions, on the ground that both questions and answers ought to have been written down verbatim. However, in *R.* v. *Bottomley*, 1903, Lawrence J. dissented from *R.* v. *Mitchell* supra, and ruled that a dying declaration was admissible although the answers only had been written down.

In 1937 the Appeal Court held that, "Was it A?" followed by a nod of assent by the deceased unable to speak constituted a verbal statement within the meaning of s. 32 of the Ceylon Evidence Ordnance, 1895.—*Chandraskera* v. *R.*, 1937, *A.C.* 220.

The lapse of a considerable time between the making of the declaration and the death of the deceased does not make it inadmissible, if at the time of making it he had the conviction of immediately impending death. Thus in *R.* v. *Bernadotti*, 1869, there was an interval of three weeks.

A dying declaration by a person who is by law incompetent is inadmissible (*R.* v. *Pike*, 1829, para. 298, lines 1–10), examples being (1) children of tender years, (2) idiots and insane persons, (3) deaf and dumb if unable by signs to communicate their thoughts, and (4) other persons who from temporary causes, illness, or drunkenness are for the time

incapable of understanding questions and of giving a rational account of events.—*Halsbury's Laws of England*, Vol. 9, p. 221.

When the deposition of a person dangerously ill and not likely to recover is to be taken, and a prisoner has been served with a notice that such deposition is to be taken, an order that the prisoner shall be present at the taking of the statement may be made by the committing justice or by the Prison Commissioners.—C. Just. Act., 1948, Schedule X.

Finally, a dying declaration which on its face is incomplete is inadmissible.—*Waugh* v. *R.*, 1950, *A.C.* 203.

In every case the judge should point out to the jury that the declaration has not been subject to cross-examination (ibid.).

# Universities and Colleges

## UNIVERSITY OF OXFORD

The Welsh Memorial Prize for 1952, a prize which is awarded annually by Dr. Lee's Professor of Anatomy for the best set of drawings illustrative of human anatomy, has been awarded to James Freeman, Scholar of St. John's College.

Sir Howard Walter Florey, M.D., Ph.D., F.R.C.P., F.R.S., Professor of Pathology in the University, has been elected to an Honorary Fellowship at Magdalen College.

In Congregation on December 2 the appointment of Dr. Alice M. Stewart as Reader in Social Medicine from April 1, 1953, to September 30, 1959, was approved. In the same Congregation it was resolved to confer the degree of M.A. upon H. G. Epstein (Pembroke College), a Graduate Assistant in the Nuffield Department of Anaesthetics.

In Congregation on November 22 the degree of D.M. was conferred on P. M. Peters, G. L. L. Reynolds, G. D. Walker, and R. A. B. Drury.

## ROYAL COLLEGE OF SURGEONS OF ENGLAND

At a meeting of the Council of the College, held on November 13, with Sir Cecil Wakeley, President, in the chair, the death of Mr. P. H. Mitchiner (Member of Council and Past Vice-President) was reported, and the Council unanimously adopted a resolution of condolence.

A Hunterian Lectureship was awarded to Professor Milroy A. Paul, of Ceylon, for a lecture on "The Surgery of the Congenital Anomalies of the Midline Ventral Abdominal Wall."

Sir James Paterson Ross was appointed the Bradshaw Lecturer for 1952 in place of the late Mr. P. H. Mitchiner, and Sir Reginald Watson-Jones was appointed Bradshaw Lecturer for 1953.

The John Tomes Prize was presented to Professor E. B. Manley (Professor of Dental Pathology in the University of Birmingham); the James Berry Prize to Mr. R. H. C. Robins (Newcastle and Exeter); and the Hallett Prize to Dr. J. K. Ross (Middlesex Hospital).

The Begley Prize was awarded to J. H. Breed (Westminster Hospital).

It was decided to hold a Primary Fellowship Examination in Colombo in March, 1953.

Diplomas were granted, jointly with the Royal College of Physicians of London, as follows:

DIPLOMA IN CHILD HEALTH.—K. M. Pearce.

DIPLOMA IN TROPICAL MEDICINE AND HYGIENE.—T. G. Behan, D. E. W. Knight, M. J. J. T. Becker.

Diplomas in Medical Radiodiagnosis and in Medical Radiotherapy were granted, jointly with the Royal College of Physicians of London, to the candidates whose names are printed in the report of the meeting of the Royal College of Physicians of London in the *Journal* of November 15 (p. 1107).

# The Services

Colonel R. E. B. Rees, O.B.E., M.C., T.D., R.A.M.C., T.A., has been appointed Honorary Colonel of a T.A. unit, in succession to Colonel W. H. Kerr, T.D., R.A.M.C., T.A., whose tenure has expired.

Major J. S. Hitsman, R.C.A.M.C., has been appointed M.B.E. (Military Division) in recognition of gallant and distinguished services in Korea.

Surgeon Commanders A. D. Petro, R.N.V.R., and J. E. Hughes, R.A.N.R., and Surgeon Lieutenant-Commander C. W. B. Woodham, R.N.V.R., have been awarded the R.N.V.R. decoration.

# INFECTIOUS DISEASES AND VITAL STATISTICS

**Summary for British Isles for week ending November 29 (No. 48) and corresponding week 1951.**

Figures of *cases* are for the countries shown and London administrative county. Figures of *deaths* and *births* are for the 160 great towns in England and Wales (London included), London administrative county, the 17 principal towns in Scotland, the 10 principal towns in Northern Ireland, and the 14 principal towns in Eire.

A blank space denotes disease not notifiable or no return available.

The table is based on information supplied by the Registrars-General of England and Wales, Scotland, N. Ireland, and Eire, the Ministry of Health and Local Government of N. Ireland, and the Department of Health of Eire.

| CASES in Countries and London | 1952 Eng. & Wales | 1952 Lond. | 1952 Scot. | 1952 N. Ire. | 1952 Eire | 1951 Eng. & Wales | 1951 Lond. | 1951 Scot. | 1951 N. Ire. | 1951 Eire |
|---|---|---|---|---|---|---|---|---|---|---|
| Diphtheria | 20 | 2 | 3 | 1 | | 45 | 4 | 19 | 0 | 3 |
| Dysentery | 197 | 17 | 66 | 7 | | 327 | 32 | 41 | 0 | 1 |
| Encephalitis, acute | 5 | 0 | 0 | 0 | | 8 | 0 | 0 | 0 | |
| Enteric fever: | | | | | | | | | | |
| Typhoid | 1 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 1 | 1 |
| Paratyphoid | 4 | 1 | 0 | 0 | 0 | 18 | 0 | 19 (B) 1(A) | 2 | 1 (B) |
| Food-poisoning | 58 | 9 | | 0 | | 95 | 24 | | 0 | |
| Infective enteritis or diarrhoea under 2 years | | | | 12 | 13 | | | | 14 | 21 |
| Measles* | 14,791 | 1560 | 190 | 34 | 93 | 2,313 | 28 | 105 | 183 | 82 |
| Meningococcal infection | 29 | 3 | 10 | 3 | 4 | 30 | 3 | 12 | 0 | 3 |
| Ophthalmia neonatorum | 21 | 3 | 4 | 0 | | 41 | 2 | 6 | 0 | |
| Pneumonia† | 619 | 46 | 328 | 5 | 1 | 432 | 30 | 158 | 0 | 1 |
| Poliomyelitis, acute: | | | | | | | | | | |
| Paralytic | 56 | 4 | 5 | 0 | 3 | 39 | 0 | 9 | 0 | 1 |
| Non-paralytic | 21 | 4 | | | | 17 | 0 | | | |
| Puerperal fever§ | 244 | 45 | 7 | 0 | 1 | 218 | 22 | 15 | 1 | |
| Scarlet fever | 2,399 | 169 | 358 | 43 | 86 | 1,585 | 150 | 335 | 27 | 47 |
| Tuberculosis: | | | | | | | | | | |
| Respiratory | | | 162 | 28 | | | | 167 | 42 | |
| Non-respiratory | | | 30 | 10 | | | | 31 | 5 | |
| Whooping-cough | 2,138 | 148 | 115 | 33 | 81 | 1,852 | 48 | 263 | 45 | 68 |

| DEATHS in Great Towns | 1952 Eng. & Wales | 1952 Lond. | 1952 Scot. | 1952 N. Ire. | 1952 Eire | 1951 Eng. & Wales | 1951 Lond. | 1951 Scot. | 1951 N. Ire. | 1951 Eire |
|---|---|---|---|---|---|---|---|---|---|---|
| Diphtheria | 0 | 0 | | 0 | 0 | *0* | 0 | *1* | 0 | 0 |
| Dysentery | 0 | 0 | | 0 | | | 0 | | 0 | |
| Encephalitis, acute | | 0 | | | 0 | | 0 | | | 0 |
| Enteric fever | 0 | 0 | | 0 | | *0* | 0 | *0* | 0 | |
| Infective enteritis or diarrhoea under 2 years | 5 | 0 | 2 | | 3 | *7* | | *0* | 0 | 1 |
| Influenza | 18 | 7 | 1 | 0 | 1 | *9* | 0 | *3* | 0 | 0 |
| Measles | | 0 | | 0 | 0 | | 0 | *0* | 0 | 0 |
| Meningococcal infection | | 1 | | | | | 1 | *0* | | |
| Pneumonia | 220 | 28 | | 13 | 5 | *175* | 26 | | 6 | 5 |
| Poliomyelitis, acute | 4 | 0 | | | 0 | *1* | 0 | | | 1 |
| Scarlet fever | | 0 | | 0 | 0 | | 0 | *0* | 0 | 0 |
| Tuberculosis: | | | | | | | | | | |
| Respiratory | 127 | 19 | 13 | 2 | 5 | *127* | 16 | *23* | 1 | 6 |
| Non-respiratory | | 4 | 2 | 1 | 3 | | 5 | *2* | 0 | 0 |
| Whooping-cough | 4 | 1 | | 0 | 0 | *3* | 0 | *0* | 0 | 0 |
| Deaths 0–1 year | 240 | 31 | 30 | 9 | 18 | *220* | 21 | *29* | 6 | 12 |
| Deaths (excluding stillbirths) | 6,042 | 853 | 618 | 130 | 176 | *4,638* | 687 | *592* | 89 | 143 |
| LIVE BIRTHS | 7,125 | 1063 | 829 | 210 | 298 | *6,110* | 1059 | *787* | 182 | 310 |
| STILLBIRTHS | 179 | 18 | 23 | | | *171* | 18 | *13* | | |

* Measles not notifiable in Scotland, whence returns are approximate.
† Includes primary and influenzal pneumonia.
§ Includes puerperal pyrexia.

# Vital Statistics

### 1950 Annual Report

In an attempt to keep pace with advances in medical thought the new *Annual Review* (Tables, Part I, Medical) of the Registrar-General for England and Wales, for the year 1950, presents national statistics in categories that differ in many respects from those in previous reports. Indeed, these reports are a record nearly as much of changing ideas as of changing facts, which enhances the difficulties of anyone who wants to compare recent with past experience. In particular, causes of death are now classified in greater detail than formerly, the geographical areas whose statistics are tabulated have been changed, statistics relating to conurbations have been introduced, and different causes of death have been subjected to regional analysis. Perhaps the additional tabulation required, together with work on the 1951 census, accounts for the tardy appearance of this report.

A new table shows accidental deaths in such a form that it is possible for the first time to give figures for deaths due to accidents in the home; for example, in 1950 there were 4,614 deaths from accidents in private houses, and about three-quarters of them were due to falls.

The comparison between the death rates for England and Wales and those for Scotland for certain diseases shows that hypertensive disease was registered twice as often as a cause of death in England and Wales as in Scotland—445 per million compared with 203. Deaths from rheumatic fever also showed a higher rate in England and Wales—13 per million compared with 10 in Scotland. But deaths attributed to heart diseases showed a higher rate in Scotland—4,098 per million compared with 3,440 in England and Wales. Tuberculosis death rates remain higher in Scotland—488 per million for respiratory forms against 319 in England and Wales, and 65 per million for other forms against 43. Deaths from diabetes mellitus also showed a higher incidence in Scotland—118 per million compared with 83 in England and Wales. Among the less usual causes of death in England and Wales 8 were attributed to gas gangrene, 10 to scurvy, 18 to gout, 34 to haemorrhoids, 7 to nasal polyp, and 13 to lightning.

Deaths from malignant neoplasms numbered 85,270 (43,570 males, 41,700 females). The total is 2,066 more than in 1949.

### Infectious Diseases

Infectious diseases were more prevalent in England and Wales during the week ending November 29 than in the preceding week. The largest rises in the number of notifications were measles 2,661, from 12,130 to 14,791; whooping-cough 284, from 1,854 to 2,138; scarlet fever 83, from 2,226 to 2,309; and acute pneumonia 100, from 519 to 619.

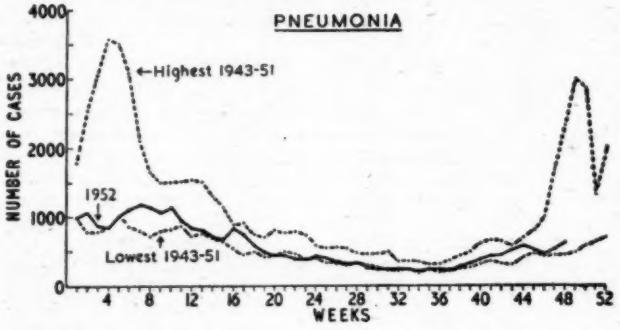
The largest increases in the incidence of measles were 431 in London, from 1,129 to 1,560; 350 in Yorkshire West Riding, from 832 to 1,182; 283 in Essex, from 1,060 to 1,343; 237 in Lancashire, from 1,057 to 1,294; and 204 in Southampton county, from 243 to 447. The largest exception to the general increase in measles was a fall of 126 in Suffolk, from 386 to 260. The largest rise in whooping-cough was 40 in London, from 108 to 148. Only small variations occurred in the local trends of scarlet fever. The incidence of diphtheria was halved, the number of notifications falling from 41 to 20. The largest fluctuations in the local returns of diphtheria were decreases in Lancashire from 12 to 5 and in Worcestershire from 5 to 0.

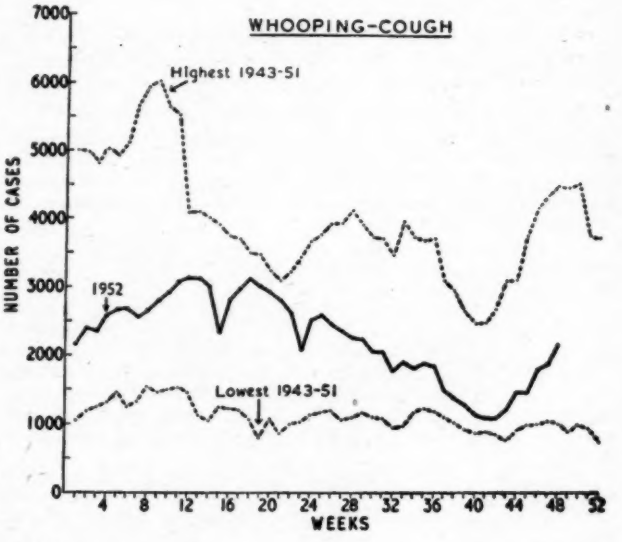
During the week 77 cases of acute poliomyelitis were notified; the paralytic cases were 6 fewer and the non-paralytic cases were the same as in the preceding week. The largest returns were Essex 12 (Southend-on-Sea C.B. 3), Yorkshire West Riding 9 (Sheffield C.B. 3), London 8, Middlesex 5, and Kent 5.

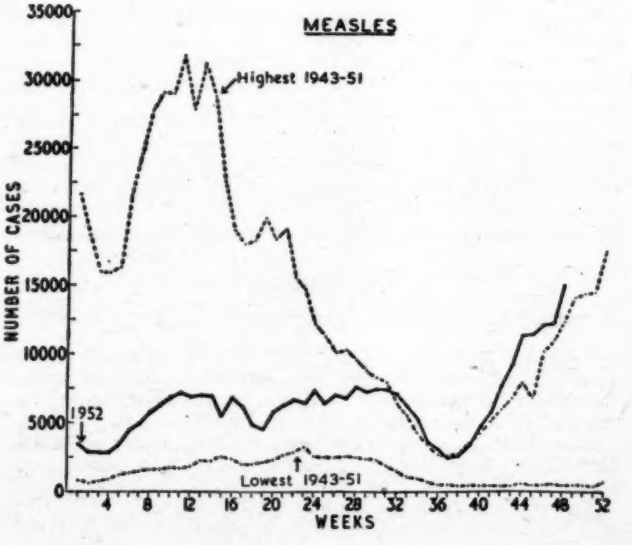
An increase of 39 was recorded in the number of notifications of dysentery, from 158 to 197. The largest of the new outbreaks was 41 cases in Kent, Penge U.D. The other large returns were Lancashire 37 (Blackpool C.B. 22), Yorkshire West Riding 32 (Bradford C.B. 19), and London 17.

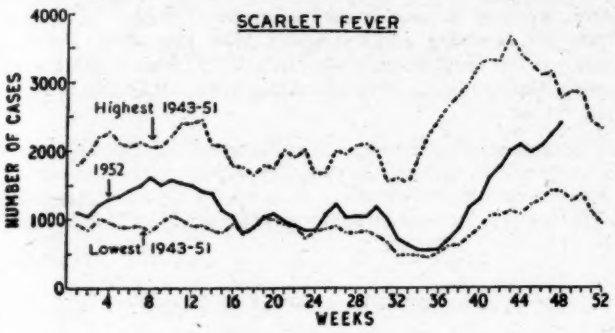
### Graphs of Infectious Diseases

The graphs below show the uncorrected numbers of cases of certain diseases notified weekly in England and Wales. Highest and lowest figures reported in each week during the nine years 1943–51 are shown thus - - - - - - -, the figures for 1952 thus ———. Except for the curves showing notifications in 1952, the graphs were prepared at the Department of Medical Statistics and Epidemiology, London School of Hygiene and Tropical Medicine.






**Week Ending December 6**

The notifications of infectious diseases in England and Wales during the week included: scarlet fever 2,259, whooping-cough 2,067, diphtheria 29, measles 16,207, acute poliomyelitis 58, dysentery 259, paratyphoid fever 4, and typhoid fever 3.

# Medical News

**Scientific Exhibition: Final Reminder.**—All applications for stands at the Scientific Exhibition at next year's B.M.A. Annual Meeting at Cardiff must be in the hands of the Secretary, B.M.A. House, Tavistock Square, London, W.C.1, by the end of this year.

**Heberden Society.**—The annual dinner of the Heberden Society was held at the Royal College of Physicians on December 12, with the President, Sir Henry Cohen, in the chair. After the toast of the Society had been honoured Dr. W. S. C. Copeman proposed the health of Mr. Iain Macleod, the Minister of Health. Like the previous president of the College, Mr. Macleod, he said, was the son of a doctor who practised in the small Yorkshire town of Skipton. During the recent war Mr. Macleod had been wounded in France. After this he accepted a staff job, and finally landed in Normandy on D Day with the Northumbrian Division. Everyone was delighted when the news was heard that Mr Macleod was appointed Minister of Health. Dr. Copeman also welcomed the presence of Sir John Hawton, Permanent Secretary of the Ministry. He was glad to see from the annual report of the Ministry that they were anxious to advance the subject of rheumatic diseases. In a witty speech of reply Mr. Macleod said his only qualification for being Minister of Health was that he had spent three years at Caius College, Cambridge. In looking at the records of the Society he was interested to see that the President's Fund remained unchanged from year to year. There was no record of either receipt or payments, and so Lord Horder would be able to take over the presidency of the Society without any financial anxiety. Finally, Mr. Macleod asked what the Heberden Society was going to do about gout, a disease he suffered from: "I rejoice to have it because I am a Tory politician and take my politics seriously." The health of the guests was proposed in a felicitous speech by Sir Horace Evans, who welcomed especially the presence among them of Lord Simonds, the Lord High Chancellor, and he regretted the absence on account of indisposition of Dr. J. F. Mountford, Vice-chancellor of the University of Liverpool. In response Lord Simonds said he had recently calculated the number of hours he had spent in making or listening to speeches, and had found that the total was 40,000. He had reached an age when he had begun to realize he had to atone for his past, so he intended to make his speech brief. He went on to say that he was taking the place of Dr. Mountford in proposing the health of the President, and he would like to praise Sir Henry Cohen for his gifts of wisdom, sympathy, and humanity. In reply Sir Henry Cohen said that the past year had been an outstanding one in the history of the Heberden Society, which now had a waiting-list for membership. The committees of the Society had been active in watching the interests of its members and in planning research. Like all societies, it was now passing on the burdens of office to the shoulders of the younger generation, and he congratulated Lord Horder on his coming presidency of the Heberden Society.

**Harben Lectures.**—On December 9, 10, and 11 Lord Horder delivered this year's Harben Lectures at the Royal Institute of Public Health and Hygiene, London. His subject was "Fifty Years of Medicine." His review ranged widely over such topics as the right of social medicine to be regarded as a separate branch of medicine, the risk that the great new discoveries, particularly in therapy and anaesthetics, may lead to an uncritical approach to diagnosis, the much-increased importance of the trained nurse nowadays, and finally, in his last lecture, the hurried origin and imperfect structure of the National Health Service. Lord Horder particularly criticized the fact that the Service is based on the hospital rather than the family physician.

**Law on Abortion.**—Mr. J. Reeves, M.P. for Greenwich, is to introduce a Private Member's Bill in February to amend the law relating to abortion. The Bill will seek to legalize abortions by doctors when done for the benefit of the patient's health. The supporters of the Bill are Mr. Robert Boothby, Mrs. F. K. Corbet, Mr. Douglas Houghton, Mr. John Parker, and Mr. Ernest Thurtle. Mr. Reeves believes that if this measure is enacted it will bring about a great decline in the activities of the professional abortionist. Exact figures for the number of criminal abortions each year are obviously unobtainable, but in 1939 an interdepartmental committee on abortion, under the chairmanship of Mr. Norman (now Lord) Birkett, estimated that in England and Wales there were between 110,000 and 150,000 abortions every year, of which about half were due to criminal interference (see *British Medical Journal*, 1939, **1**, 1248). This committee also put it on record that it was unable to accept a proposal that an unrestricted discretion to perform the operation should be given to the medical profession as a solution of the problem of criminal abortion.

**Classification of Proprietary Remedies.**—In July, 1949, the Central and Scottish Health Services Councils appointed a joint committee on prescribing under the chairmanship of Sir Henry Cohen. In its second interim report (the first was not published) this committee offered to classify such proprietary preparations as were put before it into six categories, as follows: (1) new drugs of proved value not yet standard; (2) proprietary brands of standard drugs, singly or in combination; (3) standard preparations, and new remedies of proved value, in elegant form or vehicle; (4) qualitative and/or quantitative modifications in the composition or combination of standard preparations, or new remedies of proved value, which are not accepted as therapeutically superior to preparations included either alone or in combination in the *B.P.*, *B.P.C.*, or *N.F.*; (5) preparations not in the *B.P.*, *B.P.C.*, or *N.F.* which in the committee's view have not been proved of therapeutic value; (6) preparations which are a combination of (4) and (5). The Ministry of Health accepted this offer, and for the last two years the committee has been carrying out the task of classification. Each manufacturer has been notified of the classification of his products and has been given an opportunity to make representations about it if desired. The process of classification is now nearing completion.

**Vice-chancellor of Birmingham University.**—Dr. Robert Stevenson Aitken, a New Zealander and former Rhodes Scholar at Oxford, has been elected Vice-chancellor of Birmingham University. Since 1948 Dr. Aitken has been Vice-chancellor of Otago University, New Zealand. After graduating in medicine in 1923 at Otago, Dr. Aitken came to this country with a Rhodes Scholarship. He held

appointments at the London Hospital, and then became reader in medicine at the British Postgraduate Medical School. From 1938 to 1948 Dr. Aitken was Regius Professor of Medicine at Aberdeen. He is aged 51.

**Raynaud's Phenomenon and Vibratory Tools.**—The Minister of National Insurance, Mr. Osbert Peake, M.P., was asked last week in Parliament if he would admit claims for benefit under the Industrial Injuries Act from workmen suffering from Raynaud's phenomenon. Nearly three years ago Mr. Peake's predecessor referred this question to the Industrial Injuries Advisory Council for advice, but so far the council has been unable to make up its mind on the subject. In a letter from the chairman of the council, circulated with Mr. Peake's reply in Parliament, it is explained, first, that Raynaud's phenomenon occurs widely among the population from causes unassociated with the use of vibratory tools, and, secondly, that in the great majority of industrial cases the disability is trivial. Before making a definite recommendation the council wishes to await the results of a Medical Research Council survey into the problem which is being carried out this winter.

**Dr. Brock Chisholm,** the Canadian Director-General of World Health Organization, has announced his intention of retiring from his present appointment in July. He has directed the organization's work since the preparatory stages of its formation in 1946. In a report from Geneva in the *New York Herald Tribune* (Paris edition) Dr. Chisholm is quoted as saying that the main reason for his decision is that "a permanent organization should not have the same head for too long, particularly at the beginning of its history."

**King Edward's Hospital Fund.**—The Duke of Gloucester, presiding at a meeting of the general council of King Edward's Hospital Fund for London at St. James's Palace on December 10, said that during the last two-year period grants to hospitals and convalescent homes had amounted to £342,119. In addition £100,000 had been set aside for homes for the aged sick, making the total allocation for that particular purpose in recent years £350,000.

**Study of Sex.**—Sydney University, Australia, has accepted a large collection of books on sex and a substantial sum of money for promoting sex studies, under the will of the late Dr. Norman Haire, the Sydney-born president of the Sex Education Society (see *Journal*, September 20, p. 672). After a few personal bequests, Dr. Haire left the residue of his property, valued at about £30,000, to the vice-chancellor of Sydney University "to be applied in such manner as the senate determine for the study of sexology."

**Acta Psychotherapeutica, Psychosomatica and Orthopaedagogica,** a new psychological journal, will make its first appearance in January under the management of an international board of editors. It will be published bi-monthly by S. Karger, Basle, at an annual subscription of 40 Swiss francs (about £3 7s.), and will contain original papers in English, French, and German.

**Bequests.**—Dr. George Carmichael Low, formerly senior physician to the Hospital for Tropical Diseases and director of the Division of Clinical Tropical Medicine at the London School of Hygiene, who died on July 31, left £500 to the Royal Society of Tropical Medicine and Hygiene and £100 to the Cottage Hospital, Monifieth. Dr. A. R. Parsons, of Dublin, who died on January 24, left £500 to the Royal Medical Benevolent Society of Ireland and £500 Commonwealth of Australia 3½% stock to the Royal College of Physicians of Ireland.

**Fellowship for South African Doctors.**—Applications are invited from medical practitioners registered in South Africa for the Eli Lilly Medical Research Fellowship (South Africa). This is for study in the United States, and is valued at 250 dollars a month for 12 months, plus travelling expenses to and from the place of study. The last date for receiving applications is May 15, 1953. Further information may be obtained from Dr. L. Eales, c/o Capetown Postgraduate Medical Association, P.O. Box 2980, Capetown.

**Emergency Bed Service: Applications and Admissions.**—During the seven days ending December 14 the number of applications made by doctors to the London Emergency Bed Service for admission of patients was 2,435, of whom 81.19% were admitted.

## SOCIETIES AND LECTURES

**Monday, December 22**

MANCHESTER MEDICAL SOCIETY.—9 p.m., Professor W. F. Gaisford: Treatment of Acute Infections in Childhood.

ROYAL EYE HOSPITAL.—5 p.m., Dr. T. H. Whittington: Astigmatism and its Treatment. Factors Affecting Binocular Vision.

## APPOINTMENTS

ALCOCK, WILLIAM, M.B., Ch.B., B.Hy., D.P.H., Medical Officer of Health Borough of Watford and Divisional Medical Officer, South-west Hertfordshire

BLAKE, DOUGLAS HAROLD, M.B., Ch.B., Assistant Chest Physician to the Leicester Area, Sheffield Regional Hospital Board.

CARRICK, GORDON STADDON, M.B., Ch.B., D.P.H., D.I.H., Deputy Medical Officer of Health, Burgh of Greenock.

DOBERMAN, HENRY, M.B., B.S., M.R.C.O.G., D.Obst.R.C.O.G., Consultant Obstetrician and Gynaecologist to Sunderland Group of Hospitals.

GILLIES, HUNTER, M.D., F.R.C.P.Ed., D.P.M., Part-time Consultant in charge of Psychiatric Wards, Stobhill General Hospital, Glasgow.

GUBBINS, R. C., M.B., Ch.B., D.P.H., Medical Officer of Health, Willenhall Urban District Council, and Assistant District Medical Officer Staffordshire County Council.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, London, W.C.—Thomas Hunter, M.B., Ch.B., F.R.C.S.Ed., Part-time Registrar to Orthopaedic Department; Albert Himmelhoch, M.B., B.S., House-physician.

MINTO, CHARLES NICHOLSON, M.B., Ch.B., D.P.H., Medical Officer of Health and District Hospitals Officer, County of Caithness.

MURRAY, F. J. A., L.R.C.P.&S.I., D.P.H., Medical Officer of Health, Stone Urban District, Staffordshire.

RAINSFORD, C. R. C., M.D., D.P.H., D.T.M., Medical Officer of Health to East Retford Borough and District Councils and Assistant County Medical Officer, Nottinghamshire.

WILLIAMS, DAVID HUBERT JAMES, M.R.C.S., L.R.C.P., D.P.H., Divisional Medical Officer, Port Talbot and Glyncorrwg Health Division; Medical Officer of Health, Port Talbot Borough Council; and Medical Officer of Health, Glyncorrwg Urban District Council.

## BIRTHS, MARRIAGES, AND DEATHS

### BIRTHS

**Chalmers.**—On December 10, 1952, in Cardiff, to Doreen, wife of Dr. T. M Chalmers, M.D., M.R.C.P., a son.

**FitzGerald.**—On December 8, 1952, at Gloucester City Maternity Hospital, to Ita (formerly MacAuliffe), M.B., wife of Maurice A. FitzGerald, M.B., A.D.M.R., of 10, Upper Maze Hill, St. Leonards-on-Sea, Sussex, a daughter.

**Thomson.**—On November 30, 1952, to Nancy S. M. Thomson, M.B., Ch.B. (formerly Milne), wife of Thomas Nairn Thomson, B.Sc.(Econ.), B.Com., Ivybank, Blairgowrie, Perthshire, a daughter.

### DEATHS

**Allott.**—On November 23, 1952, at the Old Rectory, Preston Bissett, Buckingham Hubert Cyril Willoughby Allott, L.A.H., L.R.C.S.Ed.

**Arthur.**—On November 21, 1952, at Edinburgh, the Reverend John William Arthur, O.B.E., D.D., M.D., late of Kikuyu, Kenya Colony, East Africa, and 13, Woodburn Terrace, Edinburgh, aged 71.

**Browne.**—On November 20, 1952, Walter Albert Browne, F.R.C.S.Ed.

**Buncombe.**—On November 25, 1952, at Walberswick, Suffolk, Guy Hope Buncombe, M.R.C.S., L.R.C.P., of The Grove, Gorleston-on-Sea, Norfolk, aged 52.

**Dyer.**—On November 28, 1952, at Martin, Lincoln, Capel Geary Dyer, L.R.C.P.&S.Ed., L.R.F.P.S. formerly of Ringwood, Hants.

**Fairweather.**—On November 25, 1952, at the Royal Northern Hospital, London, N., David Oswald Fairweather, M.B., Ch.B.

**Garden.**—On November 26, 1952, at Ford Lodge, Didsbury, Manchester, William Sim Garden, M.D.

**Goffe.**—On November 28, 1952, Ernest George Leopold Goffe, M.D., of Three Ways, Green Park, Ferring, Sussex, formerly of Kingston-on-Thames, Surrey, aged 85.

**Higman.**—On November 21, 1952, at South Petherton, Somerset, Annie Agnes Higman (formerly Corp), M.B., B.S.

**McKinstry.**—On November 22, 1952, at Hove General Hospital, William Henry McKinstry, M.D., M.R.C.P., D.P.H., late of Walsall, Staffs, and Rottingdean, Sussex, aged 86.

**Shields.**—On November 26, 1952, at Weybridge Hospital, Surrey, Albert Frederick Leopold Shields, M.B., B.Ch., D.O.M.S., of 78, Wimpole Street, London, W., and Dawn Cottage, West Byfleet, Surrey.

**Smith.**—On November 26, 1952, at Hill Harden, Harpenden, Herts, John Henderson Smith, M.B., Ch.B.

**Thomson.**—On November 20, 1952, at 3, Greenhill Park, Edinburgh, Thomas James Thomson, M.D., aged 82.

**Wickham.**—On November 21, 1952, at 89, Wilton Road, Salisbury, Wilts, Catherine Mary Wickham, L.R.C.P.&S.Ed., L.R.F.P.S.Glas., late of Rajkot, Kathiawar, India, aged 87.

**Wilson.**—On November 18, 1952, at Edinburgh, James Dunlop Octavus Wilson, M.D., of 10, Drumsheugh Place, Edinburgh.

# Any Questions?

*Correspondents should give their names and addresses (not for publication) and include all relevant details in their questions, which should be typed. We publish here a selection of those questions and answers which seem to be of general interest.*

### Sensitivity to High-pitched Noises

**Q.**—*What are the causes and treatment of abnormal sensitivity to high-pitched noises such as can be made by a knife on a plate? Is this symptom ever a sequel to otitis media?*

**A.**—It is quite normal to dislike certain piercing, high-pitched sounds such as can be made by a knife on a plate or chalk on a blackboard. If, however, the sensitivity extends to other high-pitched noises such as musical sounds, children's voices, etc., then the possibility of labyrinthine hydrops should be considered. It has been found that in this condition, which is often known as Ménière's disease, sensitivity to loud, and particularly to high-pitched, sounds is a very regular feature. The only other pathological condition in which sensitivity to loud sounds is noted is within the first few days following acoustic trauma. There is no reason why undue sensitivity to high-pitched noise should accompany or follow otitis media.

### Premarital Examination

**Q.**—*What examination—apart from such as is done for life assurance purposes—should be made of an engaged couple who ask for premarital examination?*

**A.**—The answer to this question is to some extent a matter of opinion, and certainly the scope of any examination should vary with individual patients—their outlook, nervous make-up, and experience. Some may only be concerned to have an assurance about their general health, others may be anxious to know that they are sexually normal and capable of reproduction. Again, there may be a question of examination from the standpoint of advice on a suitable method of contraception.

In addition to a medical history and examination of both parties from the standpoint of general health, it is usually wise to arrange for radiological examination to exclude pulmonary tuberculosis. They should have a Wassermann or similar test carried out, and there is something to be said for determination of their blood groups. Both should be questioned specifically, although separately, about previous exposure to the risk of venereal infection. If this risk is present, or if either party admits to a discharge which might be gonococcal in origin, repeated bacteriological investigations may be necessary.

The man should be questioned about previous orchitis or epididymitis, and the testes, epididymides, vasa, and penis examined for obvious abnormality. If there is sign of abnormality it may be wise to arrange for seminal analysis—and some authorities would advise this in any case. It may be possible to get an idea of his potency by a history of erections or past sexual experience.

The woman should be questioned about her menstrual function and, assuming she is virginal, should be examined rectally to exclude gross abnormality in the pelvic organs. The size of the hymeneal aperture and the thickness and elasticity of the membrane may be a guide on possible difficulty in consummation of marriage. If the signs lead to anticipation of such difficulty the woman herself can be instructed in gradual digital dilatation of the opening. Stretching of the hymen should never be carried out by the medical attendant without the express permission of the woman and her prospective husband.

Premarital examination has disadvantages and possible dangers, as well as advantages, and the findings need to be interpreted with great care if no harm is to result. For example, the discovery of a relatively low sperm count in the man might lead to an unnecessarily gloomy prognosis about his fertility, and might result in the cancellation of a marriage which, if the partners had been left in ignorance, might well have proved both happy and fruitful. An Rh-negative woman might be deterred from marrying an Rh-positive man because she failed to realize that the risk of incompatible mating would be mathematically small. The discovery of a uterine retroversion during premarital examination might lead to untold and unnecessary worry—if the woman was informed of it. There is, indeed, a limit beyond which premarital examination and guidance are not in the interests of the engaged couple, and this limit must be assessed separately in each individual case.

### A Blow on the Breast

**Q.**—*A girl of 12 years was hit over the left nipple with a hard ball whilst playing games. This occurred about four months ago, and the effect seems to have made the left breast swell quite considerably. Both the breast and nipple area are much larger than the right breast, and the breast tissue is tender. She is at an age when breast development is beginning, and it is possible that the injury has acted as a stimulus. She has not yet started menstruating. I should appreciate advice on the possible causes of this condition, and suggestions on treatment.*

**A.**—It is difficult to ascribe the mammary hypertrophy in this case to the blow described, and the apparent relationship may well be coincidental. Pubertal changes may occur unequally and asynchronously in the two breasts, and, provided there is no tumour present, the changes in this case need not be regarded with any alarm. Alternatively, there may be a simple mammary hyperplasia confined to one breast, and this could just possibly be related to the blow. No treatment is indicated; a "wait and see" policy may safely be adopted.

### Effect of Light on Retinitis Pigmentosa

**Q.**—*Do any environmental factors, such as exposure to "strip-lighting," cause progression of retinitis pigmentosa?*

**A.**—There is no evidence that any environmental factor influences the course of retinitis pigmentosa. The older literature contains tentative suggestions that pigmentary dystrophy of the retina may be initiated by the stimulus of light. There is no experimental or clinical evidence to support it. It is, however, not unlikely that exposure to light may bring on symptoms of retinal fatigue more readily in an eye with retinitis pigmentosa than in a normal eye.

### Rh-positive and Rh-negative

**Q.**—*A transfusion officer has written on the card of one of my patients that she must be given Rh-negative blood when transfused, but should be regarded as Rh-positive if used as a donor. What is the explanation of this? Is she Rh-positive or Rh-negative? Her blood group is A and her Rhesus type cdE/cd(e). Is she liable to have children affected by haemolytic disease if her husband is Rh-positive? She is now four months pregnant.*

**A.**—There are several Rh antigens, but the one called D is by far the most important. For this reason it has become the practice to refer to anybody who is D-negative as "Rh-negative." Thus the patient referred to in the question is considered to be Rh-negative, and if her husband is Rh-positive she has the same chance as any other Rh-negative woman of having infants with haemolytic disease.

Occasionally when Rh-negative people of the most common Rh-negative type, cde/cde, form Rh antibody they form not only anti-D but also either anti-C or anti-E. They

can, of course, do this only if blood which is transfused to them, or an infant which is born to them, has the C or E factor as well as the D factor. A person of the type cdE/cde should not give blood to an Rh-negative person in case the Rh-negative person is one of the rare people who has formed anti-E as well as anti-D. This is the reason why the patient in question should be considered as Rh-positive if she is used as a donor.

### Crying During Sleep

**Q.**—*A man of 46, who has a peptic ulcer, recently came complaining of awakening from sleep in the early hours to find himself crying ("tears rolling down my cheeks" was his description). On awakening he realizes that he is crying, stops, feels depressed for a short time, and then falls off to sleep again. He cannot remember the crying being associated with sad dreams. He is above average intelligence. He has no other admitted psychological symptoms, but he has recently had much trouble with his wife and they are now separated. Does such a symptom (I have never met it before in 20 years of clinical work) presage the onset of a psychosis?*

**A.**—The answer is no.

The adult male bravely defends himself against tears. Many anxieties and hypochondriacal feelings related to the eye, nose, throat, or chest turn out on investigation to be pathological defences against attacks of crying. Crying is part of grief, and grief has a normal culmination in completed mourning. Much grief and many early attempts at mourning are first seen in a person's dreams. The patient in question may not have worked through his sorrow for himself (and for his wife) following their separation.

### Painful Priapism

**Q.**—*What are the likely causes of painful priapism in a man of 45, coming on about 4.30 a.m. every morning? It is relieved to some extent by micturition.*

**A.**—This condition is probably of no importance as a sign of disease, urological or otherwise. It is probably a phase from which the patient will pass without any obvious explanation. As it is an annoyance the exhibition of bromides would probably serve to end it.

### Treatment of Rectal Prolapse

**Q.**—*(1) What treatment is advised for mild incontinence following the successful cure of a large rectal prolapse with a silver ring? (2) What do you consider the best treatment for a moderate degree of rectal prolapse, present for the last seven years in a woman of 80? The prolapse appears when she walks about. Her main symptom is irritation, and there is no ulceration. Is any form of repair justified at her age, and what are the prospects of success?*

**A.**—(1) It is unusual for a large rectal prolapse to be cured successfully by a Thiersch operation. Great difficulty is often experienced in getting a bowel action because the prolapse is pressed down against the wire during straining on defaecation. The mild incontinence in this case is probably due to some retention in the rectum, due to incomplete emptying. An occasional saline enema might therefore help.

(2) A moderate degree of rectal prolapse in an old lady can often be controlled by submucous injection of 5% phenol in oil. If this does not succeed, then a Thiersch operation has proved useful for mild degrees of prolapse. If the prolapse is large, and provided the patient's general health is satisfactory, radical operation is justifiable. It is considered that a modified rectosigmoidectomy together with insertion of a lattice of steel wire between the pubo-coccygei will give the patient the best chance of cure.

### Slowness in Left-handed Writers

**Q.**—*A schoolmaster says that left-handers write more slowly than right-handers, and are consequently at a disadvantage scholastically. Is this difference in speed well recognized?*

**A.**—In general this statement is true and is recognized. There are, however, exceptions, as some left-handed writers show even more speed in writing than average right-handed writers. When a left-handed writer is of low intelligence the handicap is more severe.

It has to be borne in mind that in many instances the left-handed child may be slower in writing and in other manipulations, not on account of retarded mental processes or deficient neuromuscular function, but owing to a right-handed teacher's inability to demonstrate in a left-handed manner the processes of writing and other handicrafts. Also various tools as a rule are manufactured for right-handed use, and thus the instructor's task is rendered more difficult. A simple example, common in every class-room, is that inkwells are almost invariably placed for right-handed use. This causes a slower writing standard for a left-handed writer, and note-taking and composition work are thus handicapped.

### Antibiotics in Rabies

**Q.**—*Are any of the newer antibiotics effective in the treatment of rabies?*

**A.**—Controlled therapeutic trials in human infections have not been carried out, but in animal infections and in *in vitro* experiments antibiotics have not proved effective. There is therefore no reason to expect them to be of value in rabies in man.

### Second Book of "Any Questions?"

**Q.**—*What subjects are covered in the second book of "Any Questions?"?*

**A.**—The section headings are: General Medicine, Cardiovascular Disorders, Neurology, Psychological Medicine, Dermatology, Paediatrics, Immunization, Pharmacology and Therapeutics, Clinical Pathology, Anaesthesia, Some Specialties, Mainly Surgical, Marital Problems, Gynaecology, Labour and Lactation, Forensic Medicine and Toxicology, Epidemiology and Public Health, Heredity, and Final Miscellany. Altogether there are expert answers to 198 questions posed by doctors. The book is fully indexed. Copies may be obtained, price 7s. 6d. (postage 6d. extra), from the Publishing Manager, B.M.A. House, Tavistock Square, London, W.C.1. An early order is recommended, as the number of copies available is limited.

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